



**IN THE HIGH COURT OF SOUTH AFRICA
[WESTERN CAPE DIVISION, CAPE TOWN]**

Case no: 7235/2017

In the matter between:

TECHNICAL SYSTEMS

Plaintiff

and

FEED CHAIN INDUSTRIES

First Defendant

CHRISTIAAN ARNOLDUS KURZ

Second Defendant

CQUIPTECH (PTY) LTD

Third Defendant

CGC INDUSTRIES (PTY) LTD

Fourth Defendant

CARL WILLIAM RICHTER

Fifth Defendant

JUDGMENT DELIVERED (VIA EMAIL) ON 29 JULY 2024

SHER, J:

1. This is an action in which the plaintiff, Technical Systems (Pty) Ltd ('TS'), a major manufacturer and global supplier of livestock and poultry feed-conveying products which include auger (a form of spiral wire) and 'feed chain', seeks interdictory orders and damages, together with ancillary relief.

2. It has sued the defendants on two bases. It claims that they have made themselves guilty of competing unlawfully with it (claim A) in that, via the 2nd defendant they wrongfully misappropriated and acquired confidential information and technological 'know-how' belonging to it, pertaining to its set-up and process for the manufacturing of feed chain, as well as other trade secrets, in order that they could set about manufacturing the same product in unlawful competition with it. In doing so they allegedly infringed the copyright which the plaintiff enjoyed in certain protected technical drawings of the production process and works of craftsmanship, which constitute component parts of it, by wrongfully copying, adapting and/or reproducing these drawings and parts (claim B). As a result, the design, set-up and material specifications of the manufacturing process which is utilized by the defendants in their production of feed chain is the same, or substantially the same, as that which is employed by the plaintiff.
3. TS was previously embroiled in similar litigation against the defendants in relation to the production of auger, which culminated in a judgment in its favour in which the defendants were held to have acted unlawfully and were interdicted.
4. It is common cause that the 2nd defendant (who is referred to herein as 'CK' or 'Kurtz') was employed by the plaintiff as a plant engineer from 2001 to 2009, when he resigned, and that he trades under the name and style of the 1st defendant Feed Chain Industries ('FCI'), as does the 3rd defendant CQuiptech (Pty) Ltd, a company of which 2nd defendant is the sole director and a joint shareholder with 5th defendant Carl William Richter, a friend and business partner with whom he has a long-standing relationship. The 4th defendant CGC industries (Pty) Ltd is an entity which was established by 2nd defendant and the 5th defendant. 'CGC' is an acronym which represents the 1st letter of the 1st names of the 2nd defendant, one Gary Colenbrander (who was previously employed by the plaintiff as a sales representative), and the 4th defendant. Second and 5th defendants are directors of the 4th defendant.
5. The matter has had a long and tortuous history. From the time when summons was issued in 2017 every step of the litigation process has been heavily contested. On 19 June 2020 an order was made that there should be a separation of issues and the matter consequently proceeded in relation to the merits of the claims (i.e. the liability issues) only, with the quantum issues standing over for later determination.
6. The trial took place in batches over some 60 days, during a period of approximately 3.5 years. The flow of the proceedings was constantly interrupted by objections and interlocutory and ancillary applications. A total of 23 witnesses,

which included several mechanical, process and design engineers, draughtsmen, toolsetters and toolmakers, testified: 16 for the plaintiff and 7 for the defendants. Some of the witnesses were recalled for further testimony, or cross-examination, on several occasions. The transcript of the evidence runs to over 7000 pages. Given the extent of the evidence that was led, what follows is an attempt to provide only a summary of the material and salient testimony of the witnesses whose evidence is directly relevant and essential to a determination of the issues that require adjudication. It is impossible and impractical to do otherwise. The complete record, which includes the pleadings, affidavits filed in terms of s 26 of the Copyright Act¹, and the voluminous trial bundles (which contain hundreds of technical drawings) is in the order of some 10 000 pages plus. In addition to the documentary exhibits contained in the trial bundles several physical exhibits, comprising various iterations of parts used by the parties in their manufacturing processes, and samples of chain which was produced by them, were handed into evidence. Several videos pertaining to the production process were also handed into evidence. In one of these the plaintiff demonstrated how, using the latest iteration of a linking part known as part 128, which was being used at the time by the defendant in its 'progression' press or 'tool (which came to light at a very late stage of the proceedings, and which with adjustments was inserted into the plaintiff's progression press in place of the plaintiff's similar part 2002), the plaintiff was able to produce feed chain of an acceptable quality.

7. Given the technical nature of the evidence a brief explanatory outline of the processes which the plaintiff follows in the production of its feed chain may be useful, for the purpose of understanding what follows. A strip of flat steel is fed into a complex, mechanized press, which was referred to in evidence as a so-called 'progression tool', where it is punched, cut, shaped and formed into links which are joined together to form a chain, which is then subjected to two types of heat treatment i.e. induction heating and a second, conventional heating process. In the first stage of heating the chain is raised to a very high temperature by being subjected to high frequency electro-magnetic flux, when passing through two water-cooled copper coils. On exiting these induction furnaces the chain is then rapidly cooled before being subjected to a second, convection heat process in an oven, at a much lower temperature, which is known as tempering. Although the processes of induction heating and tempering are common in metallurgical applications, the plaintiff contends that the form, design and set-up of its

¹ Act 98 of 1978.

application of these processes to the feed chain it produces, is original, particular and confidential to it. Likewise, it contends that its process for the production of chain in its progression tool, and the components of that tool, are original, particular and confidential to it, and are the product of many years of development at considerable expense and effort.

The evidence

A) The plaintiff's witnesses:

Mattheus 'Theuns' Kuhn ('TK')

8. TK is a mechanical engineer with an honours degree in industrial manufacturing. He established the plaintiff (TS) in 1988 with a university friend. TS manufactures conveyor-driven feed systems for poultry and other livestock. These consist principally of two products: poultry feed chain and a spiral wire product known as auger. The chain is used as a conveyor belt to transport feed to battery chickens in a trough. The production line for the feed chain conveyor system is more complicated than the one used to make auger. TS expended considerable effort, time and money to develop and perfect its feed chain production line, by way of painstaking trial and error, over more than 20 years.
9. TS is one of 6 manufacturers, which include McAuley Inc (USA), VDL Agrotech (Holland), SKA (Italy), CASP (Brazil) and a company in Beijing, that supply the entire world market for feed chain. VDL and CASP are also customers of TS. TS is by far the largest of these manufacturers per volume and supplies more than 40-50% of the world market. It exports approximately 98% of the feed chain it produces, of which approximately 40% goes to Europe, 5% to the USA, 15% to the South Americas (mainly Brazil), 15% to the Middle East and about 20% to China.
10. TK first started imported food grading machines to SA, but with the ever-weakening currency it became increasingly expensive to do so. In 1988 he was approached by a local farmer who asked if he could source and supply feed chain. The imported feed chain which was available in SA at the time was very expensive. TK sought to import the equipment to manufacture feed chain locally but was unsuccessful. At the time foreigners had disinvested from the South African economy and to encourage and promote local industry and manufacturing the government had introduced a general export incentive scheme which placed an emphasis on the addition of value to locally sourced raw materials. TK saw this as an opportunity to manufacture chain locally, by developing and assembling the necessary equipment to produce it. At the time there was no other entity manufacturing feed chain in South Africa.

11. The feed chain that was being supplied to local farmers was manufactured by a Dutch company, Heesen Technocom ('Heesen'). VDL Agrotech acquired Heesen in 1989. TK had approached Heesen to obtain information in relation to the technology with a view to manufacturing feed chain in South Africa, but Heesen declined to assist. However, after VDL acquired Heesen it sent TK four individual, archaic hand tools which had originally been used by Heesen to manufacture feed chain.
12. The tools were used to produce chain manually in 4 individual steps, which involved cutting, forming and linking pieces of steel. The first of the tools was used to cut or punch the raw metal which was inserted into it, the second was used to form a 'blank' link from the cut out, the third to form a connecting piece or linkage known as the 'knuckle' of the link, by bending and rounding it, whereafter it would be placed into the last tool where it would be bent further to link it to another pre-formed link, thereby forming chain. The VDL tools required the user to remove pieces of chain from each of the tools manually, upon completion of the function which each tool was assigned to perform, and to manually link each piece in the chain, using the last tool. The manufacturing process using these tools was cumbersome, complicated, and uneconomical. By the time VDL sent these tools to TS they had already long developed their own fully automated progression line.
13. TS used these tools to make sample, untreated chain during 1990, in 10m lengths. To harden the chain TS subcontracted its heat treatment to two companies, PH Treatment and Turbo Heat Treatment. They used gas furnaces in which they heated the chain to a temperature of about 860 degrees. They then 'quenched' it in oil, before subjecting it to tempering in an electric furnace. In 1992 it cost roughly 78 cents per kg/per metre, to harden and temper the chain which TS made. The chain was not of acceptable quality, as the heat treatment process was not satisfactory.
14. By 1991 TS was in financial difficulty and the bank had called up its overdraft. TK and his partner decided to part ways. He sold his house in Bryanston to settle the bank and pay out his partner. This almost bankrupted him. After the termination of their business relationship TK decided to focus on the manufacture and production of feed chain. As it was important to use the correct grade of steel he consulted Iscor for advice. He was aware that VDL was using SAE (Society of Automotive Engineers) 1030 grade material. Iscor recommended that steel with a SAE 4130 grade i.e. higher grade be used.
15. Having decided upon the steel which was to be used, TS envisaged converting the manual process using the VDL tools, into an automated one, by developing a

full progression tool. This would allow TS to process raw strips of metal through a mechanized press, where it would be cut, formed, bent and linked into a chain, in a continuous process.

16. TK consulted several engineering firms on the East Rand for this purpose, including Erosion Technology ("Erosion"). In 1991 TS provided Erosion with the VDL tools, a sample of chain produced by a supplier (Big Dutchman) and a sample of TS chain, and commissioned it to develop a progression tool, and for this purpose concluded a confidentiality agreement with it. Erosion worked on the development of a progression tool until August 1992, at which time it provided TS with a 'die set', which consisted of a 'die master' and several parts, and sketches of them. TS could not produce feed chain using these parts.
17. The 'die master' was a strip of steel which depicted the individual steps which were to take place in the envisaged continuous progression process. In the first step the steel strip was to be 'blanked' as it was fed into the 'tool'. The second step was a so-called 'idler' step. Nothing was done to the strip, in this step, other than to progress it to the third step, in which the 'knuckle' for a chain link was to be formed by cutting away the centre of the strip and bending it. During the fourth and fifth steps the knuckle was to be bent further backwards, so that it could close and form a link up with the strip. In the final step the formed link was to be separated from the link which was being formed behind it. Thus, the progression tool envisaged a continuous process of cutting, forming, linking and connecting feed chain, link by link.
18. Using the base tool developed by Erosion, with modifications which were made to it during a further period of development, TS was able to produce some feed chain from the 3rd quarter of 1993, at an initial rate of 60 links per minute. (With the continuous developments and refinements over the course of the years since then it was able to double that rate by 2020). The capital outlay for the production line in 1993, which consisted of the progression tool and a C-frame press, was approximately R110 000.00.
19. After TK moved to Cape Town he looked for a new entity which could assist with the ongoing development of the progression tool. He found Schuurman Engineering ("Schuurman") in Bellville. He worked with Schuurman on the progression tool from July 1992 to March 1994. Schuurman did not change the basic design of the tool but assisted TS to modify and refine parts of it.
20. The progression tool produced by Erosion and Schuurman's efforts was not properly operational. Some feed chain was produced using it, about a year after TS worked with Schuurman. The first export order for chain made using the tool

was produced in November 1993. It took about three months to produce a container of chain. Production was erratic, and the quality was inconsistent, as the stripper plate in the press used to get stuck from time to time and the linking functions were not satisfactory. Also, at the time TS had not yet properly developed its own heat treatment processes.

21. The linking component, which was referred to throughout the trial as 'part 2002' (after its model/iteration number), is an extremely complex part which TS spent many years developing and refining, so that it could function properly. Part 2002 has a two-step working configuration, whereby, as it forms, bends and closes a link it joins it to the one that follows behind it. To get the part to process connected chain links in this manner, at a speed of two links per second, took several iterations over many years and a lot of money.
22. Schuurman found working with TS too demanding and TS was compelled to engage another engineering firm, Precise Tool and Die ("Precise"), to assist it with the ongoing development of the tool. Schuurman provided TS with a floppy disc containing digital drawings of components of the progression tool. Between March and August 1994 Precise started making drawings of parts of the tool on paper, in A1 format, which could serve as assembly drawings for the manufacture of the tool's constituent parts. The drawings were reproductions of the digital drawings provided by Schuurman. Precise did not make or create any original drawings or works.
23. As Precise found the progression tool to be very complicated it advised TK to engage Nicolaas T Broekhuizen ("NTB"), a highly skilled mechanical engineer who specializes in machine design, who had done work for it, to make drawings of the tool parts. Between August and November 1994 NTB produced a full set of assembly drawings for the progression tool, including each of its component parts.
24. TS was then able to use the drawings which had been created by NTB to commission the manufacture of those parts, by Precise. NTB continued to work for TS, designing and drawing modifications and improvements to various components of the tool. TS also employed Gaffie le Roux temporarily in 1995 to assist with this and in 1997, he became a fulltime employee. Le Roux and Alfred James Smidt ("AJS"), an independent contractor who was engaged by TS, continued tweaking the drawings on part 2002 until they left the service of TS. AJS was a highly skilled individual who was responsible for several important innovations and modifications to the TS production process.

25. That then as far as the progression tool is concerned. TK testified about several other parts of the production line which were developed by TS over the course of time, which included 'bobbins' i.e. reels on which the chain is wound and conveyed from the progression tool to the induction oven for induction heating, and from there to the temper oven for tempering. The bobbins are based on the concept of a reel but have a peculiar design which specifically caters for the tempering process. TK first made a rough design drawing for the bobbins in 1993.
26. From 1992 onwards TS spent a considerable amount of time and effort in developing an induction oven for the hardening heat treatment part of the operation. Until that time, it had been outsourcing the heat treatment of the chain.
27. Induction heating is a method of raising the temperature in an electrically conductive metal by subjecting it to a high frequency electromagnetic field, which is generated through a water-cooled coil which surrounds the metal. Alternating current which flows through and from the coil induces molecular disturbance in the metal, causing it to heat up. Induction heating is widely used in metallurgical applications, to rapidly heat metal to a very high temperature, which causes expansionary changes to its molecular structure. When the heated metal is then 'quenched' i.e. rapidly cooled, a contractionary molecular rearrangement takes place in the metal, which results in it being hardened.
28. TK met with Dave Thomas of Solid State Induction Heating in Johannesburg, and they discussed the development of an appropriate and specifically designed induction oven for the feed chain. TS bought its first high-frequency generator and a 1m long induction coil for this purpose from Solid State in 1993.
29. The development of the dimensions of the induction coil and its shape and setup, was attended to by Solid State and AJS. The configuration of the third-generation induction oven, which was installed in 1995, was developed by a team of people which included TK, AJS, Jose de Nobrega and Nicol van Zyl.
30. TS' induction heating process was developed over years of experimentation, in its quest to improve the heat treatment process. After TS used a basic coil design and an initial generator it had obtained from Solid State, it realized that it needed to make modifications to the process, as the heat treatment was not uniform or reliable, and was not of the standard required. To that end, it acquired a second generator from Solid State and built a second coil, which it referred to as the 'soaking' coil, which was 2 m in length. TS' induction heating process thus consisted of a 1m direct induction heating coil oven which was positioned above a 2m indirect heating 'soaking' coil oven. (It later replaced this with a longer, 4m

'soaking' coil). AJS was heavily involved in the design, set-up and construction of the 1st and 2nd induction furnaces and their components.

31. The plaintiff's heat treatment process takes place as follows. As the chain exits the progression tool it is coiled by a motorized coiler onto a bobbin (which can carry chain of 100's of metres in length), which is transported to the induction ovens via a forklift. The chain is then unspooled i.e. uncoiled from the bobbin and pulled up to the entrance at the top of the 1st coil/oven (a height of some 8m), by a decoiler, from where it is drop fed through the middle of the coil, by means of a sprocket-driven system and a so-called 'hakie' i.e. a hook, which was designed and built by AJS. As the chain falls through the 1st coil, it is heated by direct induction i.e. the magnetic flux heats the chain directly.
32. In 1993, the 1st coil was cast into a refractory (with dimensions of about 30 cm x 1 m). The heating process was uneven and problematic. If the feed chain accidentally made contact with the coil an electrical short would occur, which would burn through the coil. This required the coil to be recast, which resulted in an interruption in the heat treatment process for up to 3 days.
33. Because of the constant shorting and burning, during 1994 AJS devised a unique, inner isolator which was covered in a ceramic cloth liner, through which the chain could travel, as it passed through the coil. The isolator prevented the chain from touching the coil and causing a short. AJS also designed a mold in which to cast the isolator. The use of an isolator simultaneously solved the problem of oil burning off the chain and clogging up the coil, thereby creating a fire hazard. The isolator allowed the oil on the chain to burn off harmlessly whilst the chain moved through it without clogging the coil, and the fumes could be extracted from the top of it.
34. The second stage of the plaintiff's induction heating process involves a 'soaking' coil, which heats the feed chain indirectly as it progresses through it. This is done by causing the magnetic flux to heat up a metal susceptor pipe through which the chain passes, thereby heating the chain, as it passes, via thermo-radiation.
35. Each link in the chain takes approximately 40 seconds to travel through the 2 induction ovens. During this process, the chain is heated to 860 degrees Celsius, and the heat is distributed evenly through each link. As the chain exits the bottom of the soaking coil it is 'quenched' in a tank of water, which allows it to cool rapidly. This causes the metal in the chain to harden into a martensitic state. Although the rapid submergence causes agitation of the water, there is no steam and thus very little evaporation.

36. After the chain exits the water tank, it is pulled across a table where it is air-dried, and then recoiled onto a bobbin, before it is taken to the temper oven for the tempering process. Tempering involves reheating the chain to a lower temperature, in a temper oven, which operates like a standard convection oven, whereby the hot air created by a heated element in the oven is circulated. Tempering is necessary because the induction heating and quenching process causes the chain to harden and become brittle, and it needs to be 'tempered' i.e. reheated, to soften it and give it some flexibility.
37. The very first temper oven that TS used was built for the purpose by Thermopower Furnaces. It was a round, cylindrical oven which was installed in a vertical, "eye-to-the-sky" position, with a lid which swung sideways. A bobbin with feed chain on it would be hoisted vertically above the oven and then lowered into it. Heat was then distributed through the oven from the bottom upwards, by means of a fan, which was situated at the bottom of it.
38. The cylindrical oven produced inconsistent tempering of the feed chain and the chain remained brittle in places, because the oven did not allow for the even circulation and penetration of heat through the coiled chain on the bobbin. The other problem with the cylindrical oven was that sometimes, when the bobbin was hoisted into a vertical position to be placed into the oven, the chain would uncoil. It would then have to be completely de-coiled and re-coiled onto the bobbin for being lowered into the oven.
39. With a view to solving these problems TS contracted Thermopower Furnaces to design and build a tempering oven that worked horizontally. This resulted in several fundamental changes to the tempering process. In the first place, instead of having a cylindrical shape the temper oven became rectangular or chest-like, and the lid opening mechanism was altered from a horizontal, sideways movement to a vertical, flip-top one. This allowed the bobbin to be lowered into the oven in a horizontal position, without the chain decoiling. In the second place, several innovations and modifications were effected which were aimed at improving the flow of hot air in the oven and throughout the chain on the bobbin. One side of the bobbin stem was opened, and the opening was aligned to fit against an articulating valve on the inside of the oven, through which hot air was circulated into the oven. Holes were also made in the stem of the bobbin, which was covered in mesh. This allowed the hot air that came into the bobbin from the valve to flow into the bobbin reel and to spread evenly throughout and around the coiled chain. via the holes. These innovations resulted in consistent tempering of

the chain. AJS in conjunction with Thermopower were responsible for these innovations and AJS built the bobbins.

40. Towards the end of 2018 TK discovered, from electronic information that was obtained during Anton Piller proceedings (notably email communications that were found on 2nd defendant's private HP laptop computer and his former TS Mecer work computer) that a group, which he referred to as a 'syndicate', comprising 2nd and 5th defendants, Colenbrander and one Fei Zhuang (a TS employee stationed in China), had conspired to appropriate confidential information and trade secrets of the plaintiff including its manufacturing know-how, pricing, customer lists and thousands of drawings in which it held the copyright, and were attempting to compete unlawfully with it, in the production of auger. The group also discussed competing unlawfully with TS in the production of feed chain. The syndicate had gained access to the plaintiff's confidential information by hacking into its e-mail servers from September 2009 (as Colenbrander left his employment with TS), to October 2018.
41. During his evidence TK referred to numerous emails which members of the group exchanged, including emails where they had targeted 3 of the plaintiff's established customers: Rexnord, Agromarau and CASP.
42. In an e-mail from CK to 5th defendant and Colenbrander, CK had expressed concerns about their operations in South Africa and suggested they should possibly consider moving their auger production plant offshore to China or Brazil, to avoid detection by TS.
43. In 2013 Colenbrander had reached out to Mr Moradi, the owner/CEO of an Iranian company, Arsamkar, an existing customer of the plaintiff, and had made various proposals to it on behalf of the 'syndicate' (trading as RTS) which included offering to produce auger and feed chain for it, to supply it with 'high-quality' drawings (which would have been drawings of various components of the plaintiff's production line) which would enable Arsamkar to set up its own plant for the production of chain, or to supply it with a complete, ready-made feed chain production line, for \$234 million. The various component parts of the production line would be manufactured in SA by 2nd and 5th defendants and exported to Iran, where they would be assembled and commissioned by CK. RTS also offered to provide pricing and contacts for customers in the Middle East, including Turkey, Yemen, Syria, Iran, Iraq, Egypt and Dubai. These customers were existing clients of the plaintiff and represented 15% of its sales. RTS held out that it had the necessary expertise in the manufacture of feed chain and owned the designs and

know-how for the chain manufacturing process. Moradi expressed interest in acquiring a feed chain production line from RTS, for \$19 million.

44. Similar proposals were also prepared by the syndicate for Plasson, a French manufacturer and supplier of livestock equipment. In an e-mail to it Colenbrander said that the group had the necessary know-how and capacity for the manufacturing and proper heat treatment of feed chain and pointed out that whereas some entities had succeeded in manufacturing chain they had ultimately failed because the chain had been of a poor quality, as they had lacked the requisite know-how pertaining to a proper heat treatment and tempering process.
45. TK was of the view that TS' mastering of the heat treatment processes of induction heating and tempering at an economical cost to it was one of the principal reasons for its commercial success and strength over many of its competitors.
46. Aside from these instances of unlawful competition it transpired that the syndicate had sought to divert customer orders which were meant for TS to itself and had used TS' confidential pricing and customer information to undercut its prices. The first such misappropriation of a corporate opportunity occurred whilst Colenbrander was still employed by TS, approximately 4 months after CK had left its employ. Zhuang diverted an order from a company in China for a container of auger at a value of \$38 million. Fortunately, TS discovered what Zhuang was up to before the order could be executed and his services were terminated.
47. During cross-examination of TK several common themes emerged. By way of summary these were that, firstly, much of the plaintiff's production process was not private and confidential to it, but was either in the public domain, or accessible to the public. In this regard reference was made to a promotional video which the plaintiff had commissioned, which it was contended depicted the manufacturing of chain by means of its progressive press and its heat treatment by way of induction heating, as well as a photograph of part 2002 on the website of TDK Coating, an entity which was responsible for a coating treatment. It was also put that any person walking past the plaintiff's factory would be able to see the progression press and induction coils as well as its bobbins. In the 2nd place it was contended that the principles and processes which were applied in the production of chain were 'common knowledge' in the field of engineering and as such also in the public domain and accordingly open for exploitation for anyone, and inasmuch as whatever chain was to be produced by a competitor had to be in conformity with the market standard chain produced by McAuley, it was inevitable that the dimensions of the chain and its function, would determine its form and its production. Thus, so it was contended, the process for the

manufacturing of chain would always be more or less the same, or substantially similar, to that followed by the plaintiff. Lastly, it was contended that the production line and process which the defendants set up was the product of their own independent and original effort and thought, with assistance from experts such as Peter Feltham, a toolmaker.

48. In response TK disputed that the plaintiff's production process was openly depicted in its promotional value video. He pointed out that, whilst the progression press was visible in the video only the outside of the machine could be seen and not its inner workings. Thus all that an observer would be able to see was a strip of metal entering the press and exiting it in the form of a chain. Likewise as far as the plaintiff's heat treatment was concerned the configuration, and specifications of the plaintiff's induction coils could not be seen or deduced by an observer, nor would an observer be able to see the inner workings such as the isolator in the 1st coil or the susceptor pipe in the 2nd. So too, an observer would not be able to see the inside of the plaintiff's temper ovens in the video.
49. As for the contention that form followed function and that the process of manufacturing chain would inevitably be the same or substantially similar, amongst competitors, TK reiterated that the plaintiff's process was unique and special in its set-up and heat treatment, and it was not inevitable that the progressive press tool would look the same or be substantially similar. He contended that the steps which were to be affected to the metal strips on their progression through the progression tool need not necessarily and inevitably have to be the same. In this regard he pointed out that even on the defendant's die master it was evident that more steps had been included than those adopted by the plaintiff, in that there were more idler steps involved. In addition, he contended that the intricate and complex interlinking process which the plaintiff had adopted in developing part 2002 was one that need not have been copied by the defendant, and it could have developed its own, particular and less complex and expensive part. Instead, it was evident from a comparison of the parties' linking parts (parts 2002 and 128) that the defendant had essentially copied the plaintiff's solution to the point where it was virtually identical, save for minor differences in certain dimensions.
50. As for the contention that the defendants' process and production line was the product of independent, original effort and thought TK pointed out that there were several idiosyncrasies and design flaws in the plaintiff's production process, which served no material purpose, and which had nonetheless been copied by the defendants, which gave the lie to this averment. In this regard he pointed out,

firstly, that at their induction furnaces the defendants had placed a temperature probe at the exact height and position as that which the plaintiff had adopted, even though the defendants' coils were not as high and the concentration of windings on the upper 3rd of its one coil was not the same, and there was no logical, functional reason to place the temperature probe in the exact same spot. In similar vein, the defendants made use of wooden meranti blocks to support their coils, just as the plaintiff had done, even though the use of such blocks constituted a fire hazard. And as far as the induction coils were concerned the defendants had likewise copied the shapes of the roundings of the coils, and one coil was round whilst the other was oblong. He pointed out that ideally, to provide even, penetrative heating through an object which is being subjected to induction heating, the coils should follow its shape. If it is not possible to have the coils mimic its shape, then a round coil would offer the best all-round through heating. The construction of an oblong-shaped coil for the plaintiff's 2nd coil had been an arbitrary accident in design, and there was no reason why the 2nd coil should not also have been round. Had it been round it would probably have offered optimal heating. Similarly, he pointed to the evident and marked similarities between the construction, dimensions, shape and configuration of the plaintiff's inner isolator and the mould which it used, and those of the defendants, as well as in the tempering processes and ovens which the defendants had constructed, none of which had to have been the same or substantially the same as those of the plaintiff.

51. He pointed out that it was evident from the Anton Piller search that the 2nd defendant had transferred approximately 34,000 electronic files from his Mecer (ex-TS) work computer to his personal HP and/or Dell laptops and to other hard drives. These files largely contained drawings which belonged to the plaintiff, of its confidential production processes and machinery, which 2nd defendant had no right to have in his possession after leaving the plaintiff's employ, and there was evidence that he had deleted hundreds if not thousands of other such files, as he had unlawful access to TK's emails and was monitoring them and in doing so became aware that the Anton Piller proceedings had been launched. It was evident from an examination of these files that the drawings which he had in his possession did not only pertain to the production of auger but also to the production of feed chain.
52. In re-examination he pointed out that there were instances where 2nd defendant had made drawings using a TS template which he had forwarded to the 1st defendant, and he reiterated that 2nd defendant had misappropriated drawings of

parts or processes pertaining to the plaintiff's production of feed chain. In response to a proposition that whilst CK may have used a TS template he had not used the content of any of its drawings TK pointed out that not only had he used the TS template but he had also adapted its drawings using CAD software, and then deleted the TS logo from the adapted drawing and had saved it in a file under a new file name, but had left the date the drawing had been made. He had likewise in a similar fashion wrongfully adapted and used a TS drawing of the top plate drive assembly which he had forwarded to 5th defendant.

53. He also referred to a sprocket drawing which was found on 2nd defendant's personal computer. This was a drawing which had been done by AJS and NTB after 2nd defendant had already left the employ of TS. This was a further indication that 2nd defendant had participated in the wholesale misappropriation of drawings belonging to the plaintiff, in which it enjoyed copyright. He pointed out that although 2nd defendant had worked closely with NTB and Le Roux and had on occasion been asked to work on packs of drawings which had been provided to him by them, he had not been supplied with, and was not supposed to have in his possession, drawings pertaining to the plaintiff's entire auger and 'flat wire' production line.
54. In a further response to the contention that the defendants' processes were the result of independent and original effort and thought, TK pointed out that in an affidavit which the 2nd defendant filed he had claimed that he had designed his factory 'from scratch' and had not copied any part of the plaintiff's plant layout. This was clearly untrue if one had regard for the substantial similarity in the layout of the parties' plants, which was evident from the photographs which were submitted in evidence, which were taken during an inspection of the defendants' premises. In the self-same affidavit 2nd defendant had alleged that the designs which had been adopted by the defendants were the product of original and independent thought and were quite 'straightforward' given his training and experience, and he had not been in possession of a copy of the plaintiff's drawings pertaining to the production of chain. This contention was belied by the fact that 2nd defendant was able to produce the Arsamkar strip drawing, which was modelled on the plaintiff's strip, and had commissioned Feltham to assist him in the development and design of the progressive press tooling. TK pointed out that, in this regard, it was evident that despite Feltham's skills, experience and efforts he had been unable to produce a design for the linking part, using his own endeavours and sophisticated software, and was only able to do so after he was provided by 2nd defendant with a photograph of the plaintiff's linking part, which

was taken from the TDK Coating website, and instructions and prompts which were given by 2nd defendant in numerous emails, with great precision and specificity in relations to dimensions and functionality.

55. In this regard, it was put to TK that Feltham was given a piece of McAuley chain and a drawing of a strip (the so-called Arsamkar strip) which Feltham used to reverse engineer the die master strip layout. TK denied that it would have been possible for Feltham to have produced the defendants' die master or its linking part, utilizing only the piece of McAuley chain and the Arsamkar drawing. He said this would be like saying that someone was able to write a particular story, because they had been provided with MS Word.
56. During further cross-examination and re-examination TK testified that with the entry of the defendants in the market in or about 2017-2018 TS suffered a loss of millions of rands in gross profit, because it had to reduce its price of chain per metre (initially by 10c and later by 20c) to remain competitive. On average, the loss which had been suffered annually since then was in the region of approximately R20 million.
57. Finally, during a further recall TK gave evidence pertaining to the assignment of copyright by AJS and his close corporation BTM. In April 2019 TS had concluded an agreement with AJS and BTM whereby copyright in the 'works' produced by them for TS, were assigned to TS. The agreement however mistakenly only referred to copyright in technical drawings and failed to refer to copyright in the other 'works' which had been produced, as defined in the Copyright Act, in which copyright subsisted, such as works of craftsmanship. As the agreement did not correctly reflect the parties' intention, on 24 May 2022 an agreement to rectify it was concluded between them. In terms of this agreement the definition of works was amended to include all works (in two- or three-dimensional format), or adaptations thereto which were created and/or owned by any or both of the assignors (AJS and BTM), in relation to parts, ovens, equipment, machinery, tools and the like, used in or otherwise related to the production of feed chain or the parts, equipment, machinery, tools and the like, used in or otherwise related to the production of feed chain equipment.
58. TK further pointed out that on the advice of his attorneys, in 2022 he concluded a further agreement with AJS and BTM in terms of which he acquired AJS' member's interest in BTM, and it was recorded that insofar as any right to copyright had accrued to BTM, it was assigned to TS.

Nicolaas Theodorus Broekhuizen ('NTB')

59. NTB is a mechanical engineer with approximately 30 years of experience. He is a South African citizen and has resided in SA since birth. He worked for Liebenberg & Stander Consulting Engineers, Prokura Diesel Services and Stelkon before establishing his own close corporation which trades as NTB Technical Services CC, which specialises in custom-made machine designs and drawings. He first acquired his skills when he worked for the arms manufacturer Denel, where fine tolerances and precision work was required.
60. From October 1994 onwards he was the author of a multitude of drawings and revisions thereto pertaining to the plaintiff's progression tool and its constituent parts, as well as parts of its production line, after he was commissioned to do so pursuant to a referral from Precise Engineering. Amongst these were drawings of components in both the top and bottom parts of the progression tool, including the link-forming pin of the top part of the tool and the die for the link-forming bottom part of the tool (Part 2002), as well as of the oven moulds and the sprocket assembly drive. He gave detailed technical evidence about these drawings. It was understood that, in compiling these drawings for TS copyright thereof would vest in it. On 21 February 2017 copyright in the drawings was formally assigned to it by NTB/NTB Technical Services CC.
61. TS commissioned these drawings as it was not possible for it to manufacture the constituent parts of the progression tool from the drawings which had been provided by Precise. To produce manufacturing drawings for each component/part of the progression tool NTB had to interpret and make sense of the assembly drawings which had been supplied by Precise and the intended functioning of every component and its interface with others. This required him to identify each component in the assembly drawings, and then to "pull it out" i.e. to extract it individually from the drawings. Although the assembly drawings were to scale, very few dimensions were reflected on them, with the result that the only way to obtain these was to conduct measurements, either on the assembly drawings, if this was possible, or on hand-drawn sketches he made, utilizing Vernier callipers and other precision instruments. Once this was done, he had to calculate the tolerances required, including functional and cutting clearances for the punches and dies, to ensure none of the components would interfere with each other. Utilizing CAD software he was then able to produce detailed manufacturing drawings (complete with dimensions, tolerances and notes) for each component in the progression tool. In doing so he used his specialist engineering and draughting skills. A considerable amount of time and effort was involved in producing these drawings, over the course of several months.

Thereafter he worked on revisions to the drawings following modifications which were made to the parts from time to time, to improve or refine production or to update any discrepancies that were found in detail component drawings. Each change/modification to the drawing of a component meant that the assembly drawings had to be 're-assembled' and redrawn to reflect the modifications or revisions. A lay person without the necessary specialist engineering and draughting skills would not have been able to produce manufacturing drawings of the component parts of the progression tool from a simple consideration of the assembly drawings which had been provided by Precise.

62. AJS was the source of the designs of the oven moulds and was responsible for their manufacture. In 2002 NTB was asked to compile as-built drawings of the existing moulds, because no drawings existed of them, and a data pack of their specifications was required for record, maintenance and manufacturing purposes. NTB made hand-drawn, rough sketches of the mould components, then measured them to obtain their dimensions, which he recorded onto the sketches, and then used this information to produce assembly and manufacturing drawings utilizing CAD software. Further drawings and revisions of drawings, of the oven moulds, were made in 2007. As in the case of the progression tool, in doing so parts lists which specified the components required to build a complete oven mould were created and part numbers were allocated to each part or component.
63. NTB was present at inspections that were held at the plaintiff's and defendants' premises on 6 and 7 November 2019, at which photographs of various aspects of the parties' respective feed chain production lines were taken. He used the photographs and the observations he made during the inspections, to make a comparison of the parties' progression presses and their oven moulds. In doing so he prepared illustrative drawings for comparative purposes and compiled a report in this regard, which was contained in his expert summary. He made extensive reference to the photographs and drawings during his evidence. He also examined and compared drawings of TS's revision 9 of its linking part 2002 and 1st defendant's ('FCI's') revision 11 of its linking part 128.
64. By way of introduction, he made the following general comments about the parties' progression tools. The TS progression tool has fewer components than the FCI tool and is a bit shorter than it, due to the extra idler steps that have been provided for in the FCI tool. This does not in any way impact upon the processes which are performed by the tools, as the length, width and breadth dimensions of the tools are non-functional differences. The difference in length is because the

die configuration of the two tools differs: the TS tool ends with the link-forming die, whereas the FCI tool has an extra die at the end.

65. The top parts of the tools do not look the same but fulfil the same function. The bottom parts of both tools perform the same function and essentially follow the same progression, and the process of shaping and forming links is materially the same in both. Both are also visually similar in that they have link-forming dies which are mounted on a bottom die set by means of four socket head cap screws and have four spring loaded pillars on them. Although the two stripper plates are visually slightly different, and the TS plate has fewer components, they both fulfil the same function of lifting the chain over the link-forming die for the formation of the next link. Both plates are situated between the top and bottom parts of the tools.
66. As far as the link-forming component of the tools i.e. plaintiff's part 2002 and the defendants' part 128 is concerned, both serve the same function viz the formation and closure of links in the chain. As is evident from the photographs both parts combine the two operations of link-forming and link-joining and closing, in one. From a tool design point of view these operations need not have been contained in a single component and could have been separated into two separate parts, which would probably have resulted in lower manufacturing costs. TS' process of combining the tools in one part, was successful, but not essential for the end-product. TS' linking part is extremely complex and was the most difficult part in its production line to conceive, design and make properly and optimally functional.
67. The two linking parts are substantially similar in design, shape and form. Both have a half cylindrical shape from the side elevation, with a radius on the edges of both sides. The shape of the final, link-forming aspect or 'face' of both parts is substantially similar and presents as two radii connected with a flat surface. Both linking parts have slotted counterbored slots for forward and backward movement, to adjust and obtain the correct pitch of the chain in its final form. As was the case in respect of the link-forming and closing functions, if this part of the component was split into two sections, only one of these would have had to be slotted, thereby reducing manufacturing costs and allowing for easier adjustment of the pitch. Both linking parts also use a dowel pin as a hooking mechanism, which is substantially similar. This is but one of several mechanisms that could have been used for this purpose.
68. NTB prepared a drawing (annexure 36) in which he further compared the linking parts, with reference to the parties' drawings thereof (i.e. plaintiff's drawing of linking part 2002 (revision 9) marked annexure 34 and FCI's drawing of its linking

part 128 (revision 11) marked annexure 35). When later comparing revision 11 and 12 of part 128 he noted that that there were only slight dimensional differences between them and when comparing revision 12 of part 128 with TS's part 2002 he testified that they were 'visually similar' and the only difference between them was in the slots, which were cut open. He also noted that revision 13 of FCI's part 128 was produced by MTD and was not produced pursuant to a drawing from Feltham.

69. In his comparison on Annexure 36 he numbered certain corresponding aspects of each respective part on his drawing, to provide comment thereon. From this exercise it was also apparent that, save for minor, non-functional differences in dimensions the parties' linking parts were substantially the same. The three-dimensional shape of exhibit 19 (FCI's part 128), was a three-dimensional representation of FCI's drawing and was substantially similar to the plaintiff's drawing of its linking part. Visually there are striking similarities between the drawings of the two parts, and the parts exhibit a similar design, shape and form.
70. From measurements which were performed on the drawings it was evident that both parts had a forming body width of 25mm. There was no technical or design-related reason why the width needed to be 25mm, and a technician designing the linking part from first principles would not necessarily settle on such a dimension. The two wear areas on the part had a width of approximately 12mm and 14mm respectively. As the actual working area of the part needed only to be more than the wear surface a forming body width of anything more than 20mm would have been sufficient.
71. NTB also highlighted several similarities in certain radii which he measured. Thus, both drawings depicted supportive, rear radii of 8mm in the final forming stage, and an exit radius of 2mm. There was no objective reason for an independent designer to have selected a rear radius of 8mm, given that the radius of the chain was not equal to 8mm. There was also no functional reason for an exit radius of 2mm, and any other radius, or no radius at all, would have the same effect on the production of the end link. If the exit radius were to be omitted or a chamfer were to be used, it would result in a lower cost of manufacture.
72. Similarly, there is a radius of 10mm in the round, bending section of the link-forming stage of FCI part 128, which corresponds exactly with the radius used by TS in part 2002. There is no functional or design reason for selecting this exact, same radius. Both parts also have an exit angle of 45°. This angle serves no function during the forming process and could be of any value. Finally, according

to the drawings/specifications both parts use TD coating, and similar hardening parameters of between 60 and 62 'HRC'.

73. In his opinion, the similarities between FCI part 128 and TS' part 2002 cannot be explained on the basis of design practice or the functional requirements of the progression tool or the feed chain which is to be produced by it, and the chance that two manufacturers working independently would produce link-forming dies which were so similar was highly unlikely, and FCI's part 128 must have been developed with information and knowledge which was taken from TS's drawings, documents and parts and was modelled on, and was a copy of, plaintiff's part 2002.
74. As far as he was aware, the only information which was publicly available in relation to the inner working processes of the progression tool were the strip size of the steel which was inserted into it, and images or pieces of completed TS chain. Those items would, in themselves, not be sufficient for an independent manufacturer to arrive at the substantial similarity in the design of the FCI linking part.
75. Although reference was made to the photograph of the plaintiff's linking part which was available on TDC's website (until TK requested that it be taken down), even a close and studied inspection thereof could not have resulted in the numerous, material design commonalities and similarities which were evident in the two parts.
76. It was most unlikely that any technician, draftsman or designer would remember the fine dimensions of TS' part 2002, or any of the other interfacing components of the progression tool which he/she may have seen, so that they could reproduce that level and degree of substantial similarity in detail, function and dimension as was evident in a comparison of the two linking parts, including the numerous identical or very similar non-functional dimensions which are reproduced in them.
77. As regards the photograph of part 2002 that was displayed on TDK Coating's website, one would not be able to obtain the dimensions of the part from the photo and you would not be able to measure it. One would also not be able to design this part from the photograph, as it does not indicate any dimension or the direction of the forming process, or that the back is the flattening aspect, and the front the linking.
78. Given the complexity and sophistication of the workings of the plaintiff's linking part, it was evident that it was not possible to design or reverse-engineer it, simply by looking at the chain only. It is a part which, if produced independently, would require years of trial and error and 'tweaking'.

79. A chain strip 'die master' drawing depicts the steps and arrangement of dies required in the manufacturing process and a tool designer who is required to develop a progression tool based on a die master strip drawing will have been given the 'recipe' which is to be followed, which defines the steps needed to produce the product, resulting in drastically reduced development time. TS' die order was developed over a period of 20 years, during which time the configuration of its strip underwent various changes and was slowly refined. In contrast to this FCI's entire design and production process, according to the 2nd defendant's affidavit, took place within a period of 6 months. No independent designer, working from scratch, without a die master strip or drawing of it, would be able to design, develop and build a progression tool which resembled a competitor's one, in such a short period of time, unless they had copied or made extensive reference to the competitor's die master strip layout in doing so.
80. Without being given a die master or a drawing of one, a tool designer would arrange the various intermediate production steps and dies in the progression press in his or her own way, which could be expected to differ from designer to designer. It was not inevitable that independent tool designers who were required to design a progression tool would set out a process that was identical i.e. that followed the exact same steps. Thus, when NTB provided Jan Marais with a drawing and 3D model of a chain link and requested it to prepare a die master strip layout for a progression tool, the sequence of cutting, shaping, forming and linking that he produced using AutoForm was one that was completely different to that of TS. In the progression which AutoForm proposed the links remained joined in the strip, to the end, by means of a 'lacing' along the sides, whereas in TS' progression the links are cut from the strip before they are formed, not after. This is a much more difficult and complex way of producing links of chain. Likewise, in his initial design for the die master strip layout Feltham also first proposed the forming and then the cutting steps, but later changed this layout to allow the cutting to take place before the forming process, after CK instructed him to do so. As a result, the sequence of cutting and forming steps in the FCI progression is the same as that which TS has adopted. The probability of two designers working independently and arriving at this same sequence of dies, is very slim.
81. Save that the FCI strip has three idler steps whereas the TS strip only has one, the productive steps in the FCI strip follow the same sequence as those in the TS strip, and for all practical steps and purposes the strips are the same. It was evident from the emails which CK and Feltham exchanged over several months

that CK provided detailed instructions to Feltham regarding the progression steps and their sequence. From a conspectus of the emails it was evident that CK played a crucial, guiding role in every material step of the design of the FCI progression tool, and at every step of the way advised Feltham how to resolve problems that arose, for which he had no solution. The instructions and solutions which CK provided Feltham resulted in the FCI tool mimicking the TS tool and being a replica of it, particularly in relation to the linking part.

82. It was evident from his emails that despite his best and considerable skills and efforts as a toolmaker, Feltham was unable to figure out how to do the final linking stage in the progression, and CK provided him with the solution, which was that which was followed in the TS tool. To achieve this he provided Feltham with, or alerted him to, a copy of the photo of plaintiff's part 2002 on the TDK Coating website.
83. Then, he advised Feltham that a stripper plate was required and on 16 October 2015 informed him that locator pins were needed for downward movement. In November 2015 he instructed Feltham that, on exiting the forming process, the chain needed an arc of 1.25 degrees. TS's chain has an arc of 1.25 degrees. Such an arc or curvature is not necessary for the functioning of the tool. The radius of the arc is not determined by the function of the tool, or the chain, and there was no technical reason for the angle of the arc in the FCI tool to have been set at 1.25 degrees. TS developed its linking part to produce this arc because its heat-treatment caused the chain to deform, so it introduced an arc to compensate for this, by causing the chain to 'pre-bend' in the forming process. A second reason for doing so was that, providing a bend or curvature in the chain allowed it to run on its edges in the feeding trough, thereby reducing wear and tear on it. CK instructed Feltham to use the same degree of arc or curvature as TS used, when it did not need to be the same. Similarly, in May 2016 CK informed Feltham that the linking part should be able to slide from left to right, to adjust the pitch of the chain, in the same way that plaintiff's part 2002 does.
84. As he did in the case of the linking part, NTB also performed a comparison between the TS oven mould and that used by FCI. Once again, there was a striking similarity between the two in design, shape and appearance. Both mould holders were rectangular in shape with a tapered rectangular cut-out in the bottom, and both had holes drilled in their side plates to provide for the attachment of the holders to the moulds by means of bolts. Both had substantially similar angular alignment profiles, with a flat bottom, top cut-outs and protrusions. The halves of the FCI mould mirrored those of TS and had a radius at the entry of the

mould, the appearance of which was also the same or substantially similar. The FCI mould halves were joined by bolts as were the TS moulds initially. (Currently the TS moulds are joined by hinges and clamps). There was no need for the shape of the FCI mould to replicate that of TS. Its profile and radii did not need to be identical or substantially the same. Because of the almost identical appearance of the respective moulds, the inner insulation cores which were produced by them, were likewise substantially identical in shape, form and appearance. Both were elliptical in shape and had an elliptical hole through their centre, and a rectangular, tapered end. In effect, the FCI mould and isolation core are reproductions of those of TS. It is most unlikely that two different designers, working independently, would have arrived at such an identical or substantially similar outcome.

85. NTB found 6 TS drawings of different elevations of its oven mould on CK's Mecer computer and 4 drawings of FCI's oven moulds on CK's HP and Dell computers. On comparing the TS drawings with those of FCI he found there were many corresponding aspects or dimensions that were exactly the same. Both mould drawings had identical entrance radii of 20mm. There is no technical reason why an entrance radius of 20mm had to be used and any radius or even a chamfer (which is cheaper and easier to machine) would have performed the same function. Both indicate Ø11 holes for M10 bolts. There was no technical reason for holes with this diameter, and these could have been Ø 10.5 for M10 bolts as per ISO 273. There was also no technical reason for using M10 bolts as no pressure is exerted on the mould. If a Ø 10.5 mm hole was used to position the mould the tapered nudges would not be required and M6 bolts would have been adequate. From the drawings it is evident that both moulds use similarly shaped tapered nudges for alignment purposes, when tapered nudges were not necessary and other methods could have been used e.g. dowel pins. Alternatively, the mould could have been designed with a simple square nudge on its one side, or clamps could have been used, as TS now does. Likewise, the bottom holders for the moulds look the same: both have a bottom plate with a tapered hole, which has an angle of 70° which matches the 20° angle of the centre mould used by TS, as per the drawings which NTB compiled. It was not necessary for these exact same angles to be used and various other combinations of angles were possible.
86. Although the use of moulds is common and the process of making an insulation core is well-known, various mould designs could have been used to produce similar or practically identical insulation cores. The dimensions referred to, which

NTB found on the two sets of drawings, were substantially identical. None of those dimensions were a technical or functional necessity.

87. NTB compiled a list of 197 TS drawings pertaining to its chain manufacturing plant which he found in AutoCAD files on CK's Mecer computer. He was able to determine that these were TS drawings because he recognised the filenames from the drawing titles and the name 'Technical Systems', and the TS logo, which appeared on the drawings.
88. During cross-examination NTB conceded that CK had knowledge of the TS strip and progression tool but doubted that he could have drawn the strip he provided to Feltham from memory. He conceded that after CK received iterations of part 128 from Clive Coenraad of MTD, he made physical alterations to it, without drawings, on a trial-and-error basis. He pointed out that Feltham was pointed to the solution for the linking component, as CK referred him to the photo of part 2002 on the MTD website.
89. He conceded that there were numerous dimensional differences between part 128 and 2002 which he had not set out in his comparison between the two parts. In doing the comparison he looked for the identical dimensions they shared and analyzed them, and if there was no technical reason for them to be identical, he listed them, and these commonalities substantiated his opinion that part 128 was substantially similar to part 2002.
90. It was put to him that the identical crossway radius of 10mm on both parts had to be this dimension for the chain that was produced by TS and FCI to be compatible with other chain, such as that of McAuley, and it was therefore a functional requirement for a standard specification of the trade. He maintained that the radius did not have to be exactly 10mm, and that it could have been 9.5mm to be compatible; and there was no engineering reason for it to be 10mm. It was then put that because there was not a precision fit, there was a tolerance on the dimension, and that the radius accordingly could not be 9.5, as that would result in chain which might be too small. NTB disputed this by explaining that dimension tolerances can vary and can either be indicated on the drawing as zero or up to a 0.5mm tolerance, which would have prevented the dimension from being too small.
91. The VDL type progression tool would be considerably different, had it to be built. It would be bigger, longer, and contain more steps, but would be cheaper to design and manufacture as it would save a considerable amount of time, delay and money. It would form its chain in a different direction. Its linking would be formed from the top, not from the bottom, and it would not make use of a dowel

pin, and its side punches would be smaller. It would only cut the chain from the strip at the end of the process and would have a lacing or carrier edge, as was proposed by Jan Marais when he used AutoForm. As a result, its final stage would not have the two concave shapes of part 128 and 2002. In his view the progression envisaged in the VDL tool would be more conventional.

92. In similar vein, whilst he conceded that there were dimensional differences between the FCI mould and the TS one he pointed out that none of these differences were functional, and the FCI mould was clearly designed with the TS mould as a reference. In response, defendants' counsel agreed that FCI had replicated the concept of the TS mould and its mould was a copy of the TS mould, albeit not an identical one.
93. During his second round of testimony NTB said that the pitch of 44.45mm in the defendants' tool, which is the same as that of the plaintiff's, cannot be measured off a strip of chain. From an engineering point of view, one would have expected a pitch of 44.5 mm to have been specified and this was also the pitch measurement which appeared on the Arsamkar drawing, which was found on Ck's HP computer. The pitch measurement listed on the McAuley website is less, at 42.352mm.
94. NTB also gave evidence, with reference to a video that was taken, of the exercise that occurred on 7 October 2020, when the latest iteration of the defendants' part 128 was inserted into the plaintiff's progression tool in place of its part 2002, and chain was produced with it. This exercise involved taking part 2002 out of the tool, making a few minor adjustments and then inserting part 128 in its place. Part 2002 was taken out of the progression tool by loosening the few bolts that held it in place, whereafter small 'shims' i.e. spacers of a few millimeters were inserted to compensate for the height difference in part 128, which was then bolted in place. The pitch was adjusted by loosening the bolts and moving part 128 a few millimeters as necessary, whereafter the progression tool was re-assembled. No machining was required. In the circumstances NTB did not agree that 'numerous', major adjustments had to be made to the TS tool to get part 128 to work in it. Part 128 was clearly interchangeable with part 2002, and it worked inside the plaintiff's progression tool without any material, structural modifications having to be made to it, or the progression tool.

Alfred James Smidt ('AJS')

95. AJS is a qualified toolmaker by trade. He has an N6 qualification and many years of experience in the design and manufacture of custom-made machines and their modification. He has built machines for use in the paint, print, agricultural and

chain industries. He has worked with high frequency generators and induction heating.

96. After working in the powder metallurgy sector for 8 years, he started working in the machine-building field. He traded for his own account and name and later via BTM Engineering CC, a close corporation he established and of which he was the sole and managing member. BTM assisted TS in various aspects of the establishment of its feed chain production plant. BTM concluded a cession of copyright in favour of TS.
97. AJS also gave evidence on more than one occasion, during which he referred extensively to, and confirmed the contents of, an expert report he filed and a report he prepared pertaining to an inspection he conducted in November 2019, of the parties' respective production plants. During his evidence he compared the design, construction and assembly of the parties' induction and temper ovens, their coilers and de-coilers, bobbins, sprocket assembly and 'hakies'. He testified that he was intimately involved in, and was largely responsible for, the design and manufacture of such items for the plaintiff. In broad terms, and by way of summary, he testified that the corresponding machines, parts and components he compared were either substantially similar or even replicas of one another. While AJS did make drawings of the components and parts of the production process that he designed and/or built, these were done after he built them. Several of these drawings were lost over the course of time. At a stage NTB was employed to produce assembly and/or manufacturing drawings of components and parts. During his evidence AJS referred to several of the drawings which either he or NTB prepared, including those pertaining to the oven moulds, bobbins and coilers and the sprocket assembly and the photographs which depicted them.
98. AJS first came to work for TS during or about 1992/1993, when TK engaged him to build a frame for an induction oven TS intended installing. AJS was involved in the initial design, set up and manufacture of the TS induction-heating facility. Dave Thomas of Solid State provided the power/generation calculation and advised on the number of coils needed for a 50-kw generator single oven. AJS then built the coils to the specification provided. They were cast in a cement block with a thick liner. They were made of very thin copper piping through which water was run to cool them. The coils ran from top to bottom and were fixed into a cement block of about a metre in length. The first coils were not effective. The diameter of the copper piping was too small and when the current travelled through it, it only reached about a third of the length of the coil before the water

would evaporate. As a result, the bottom part of the coil would burn out because of the volume of steam that was moving through the coil. The solution which AJS devised for this was to divide the piping into smaller sections with a water outlet at the end of each section and a water inlet at the start of the next. This proved to be an effective cooling solution. The inductive heating of this set-up was not good because of the small size of the generator and the coils. As a result, the rate at which the feed chain was heated was quite slow, and the heat treatment was not economical.

99. Because of the inadequacy of the first induction coil and single generator a 2nd induction oven was built that was substantially larger, and a second generator was acquired. The initial platform used for the single stage coil and generator was about 3m long by 6 m high, with the generator situated on the floor, next to the quenching bath. This caused problems as water would splash around the bath and onto the generator. A large platform was then built above the water tank, which could accommodate the two generators. This ensured that the electricity supply was not located near the coils.
100. TS used a second generator with a so-called 'soaking coil' to provide the extra, sustained heat that was required. The induction heating process thus occurred in two phases. The new generator that was acquired was used in the first, pre-heating phase and the existing generator was used for the second, soaking phase. The first phase made use of the coil which was embedded in concrete and the second phase comprised a new coil with a 'soaking' pipe.
101. The feed chain moved over the sprocket into the middle of the cast cement block of the 1st coil. Over the course of time this caused the cement layer in which the coil was encased, which was about 5 mm thick, to wear out. If the chain touched the coil, it would cause a short and burn through it. The whole cement block with the coil in it would then have to be taken down and disposed of, as there was no way of recovering the undamaged sections of copper coil from inside the cement cast. A new coil had to be built and recast in cement.
102. Because of the cost and downtime which accompanied the constant re-manufacturing of the top coil each time it shorted, AJS thought of developing a loose, inner isolator that could be placed inside the coil. The feed chain would then travel inside the isolator and would not be able to touch the coil and short it. AJS made rough drawings of what he envisaged and bought a quantity of nylon, which he provided to Schuurman Engineering, for them to machine a mould in which the isolator could be cast. Initially, the opening at the entrance to the isolator

- had a bar-shaped profile. As it was difficult to pull chain out of the mouth of the isolator AJS changed its shape by giving it rounded edges.
103. The mould which was developed by AJS made provision for bolts on the edges. The bolt holes are still visible on the mould. The first mould that AJS made was ceramic and was cast in cement. As AJS did not have a refractory mat to put around it, the inner broke when the mould was separated from it. AJS then tried placing a fibre mat into the mould and casting the inner inside the mat. Although this was an improvement, if the mould was left too long before the inner was taken out of the casting the fibre became too brittle.
104. After a further, lengthy process of trial and error an inner isolator was made by using a metal shaft that was placed into the centre of the mould. Non-conductive fire cement was then cast around it, as a sleeve. Woven fibre matting was placed inside the mould to strength the inner and fire cement was then cast into the mould, which seeped into the fibre matting as it expanded in the mould. The inner was then lowered into the coil. The bottom of the inner protruded past the bottom of the coil.
105. The inside of the isolator is an oxygen-poor environment. When the chain is heated up, the oil on it burns off. The burning produces smoke which is extracted at the top i.e. at the mouth of the isolator, by an extractor fan. The inline extractor fan which was initially used to extract the oil fumes was not effective, as the fumes would collect on and around its motor, causing it to catch fire. To solve this problem AJS suggested installing a fan which was separate from its motor, and procured one which was used to extract woodchips/sawdust from a planer or saw. After this fan was installed, there were no longer any instances where the fan caught alight.
106. AJS was responsible for designing and manufacturing the susceptor pipe which is used by TS in its soaking coil. It is made by bending two stainless steel sheets into an L-shape which is sealed by welding their edges together. From a comparison which AJS carried out, and as he also demonstrated on photographs which were displayed in court, FCI makes use of a susceptor pipe which has the same design and appearance, and which is made in the same way, as the one which AJS designed and made for TS.
107. At the time when AJS made the TS susceptor pipe, it was not possible to obtain a ready-made, manufactured pipe with the correct grade of stainless steel from a supplier. Such a pipe is however available now. As in the case of many other aspects of the plaintiff's production process, there was a process of trial and error and experimentation before the correct grade of steel for the pipe was found.

Initially Grade 304 stainless steel was used, then Grade 316 and eventually Grade 310.

108. Round-shaped pipe coils were initially used. TS later started using a square-shaped pipe coil in the 1st phase, as it was thicker than the round one, and prolonged the life of the coil. Round pipes are still used by TS in the soaking coil.
109. The supports that are used for the 2 induction ovens are made of wood. Brass screws are used to attach the coils to the wooden supports, and to separate them so that they do not touch each other. Wood was used to support the coils because it is a non-conductive material and is cheap. There are other suitable, non-inflammable materials available, such as bakelite.
110. TK requested AJS to produce bobbins for TS, per a drawing that he supplied, which AJS used as a reference. At first these bobbins were made with a round pipe stem with two flanges on the sides. Both sides of the stem (pipe) were open. At the time TS was making use of a round 'eye-to-the-sky', vertically positioned tempering oven. The feed chain would uncoil and become entangled when the bobbin was hoisted and lowered into it. The oven did not allow an even and proper circulation of heat, from the bottom to the top of the bobbin. As a result chain that was higher up the bobbin was not properly heat-treated. To sort these problems out it was necessary to design a rectangular oven, where the bobbin could be lowered into it in a horizontal position. The first 'box' oven was built by Thermopower in 1997. Thermopower produced drawings for the box oven when it received an order for a second one, relying on photographs and drawings which were provided to it.
111. Although the box oven provided for a better distribution of heat through the bobbin it was still uneven, because although the hot air flowed around the bobbin, it could not penetrate to the centre of it. This resulted in the feed chain in the centre of the bobbin remaining brittle and weak. AJS then came up with the idea of cutting holes into the bobbin stem. This allowed the hot air to penetrate more evenly into the chain, but still did not result in the chain being heated uniformly. AJS then proposed forcing the air to go through the bobbin and the feed chain, by closing one end of the stem and positioning the other, open end, against the side of the oven through which the hot air that was blown into it could enter. He made holes in the stem so that the air which entered from the side could then permeate the chain via the holes, before being recirculated.
112. As the bobbin could not be placed snugly enough against the opening in the oven, AJS mounted pipes on the bottom on which the bobbin could be centred and made an articulating valve for the opening on the side through which the hot air

entered the oven. This required a consideration of the size of the opening of the entrance of the fan, and AJS had to shop around for the right size pipes that could slide inside one another to create a valve. He then cut and welded a valve ring onto the end of the outer pipe, so that it would fit snugly over the end of the bobbin stem, to close over and around it. He also devised and made a mechanical lever which could be used to open and close the valve from outside the oven. The open end of the bobbin could then be pushed up tightly against the valve and when the valve was closed there would be an airtight seal, which allowed the hot air that was introduced into the oven to flow directly into the bobbin stem and through the chain via the holes in the stem, which were covered with mesh to allow for better permeation and circulation. These innovations and improvements were introduced by AJS over a period. Drawings of these bobbin were made by Mr Strauss who is deceased.

113. AJS also designed and built the motorized de-coilers and coilers which are used to pull the chain onto and off the bobbins. The size of the coilers and decoilers was determined by the size of the bobbins and the length of chain that could be loaded onto them. The coilers had to start and stop as the feed chain was being produced. The feed rate at which the chain was fed onto the bobbins was important as it was necessary to reduce tangling of the chain when it was de-coiled. The bobbins sit on rubber wheels that can drive or turn it in a specific direction. There is a feeder on top of the coilers i.e. a protrusion through which the feed chain is fed, which directs the chain evenly across the bobbins, so that it can be loaded evenly on them. Once again, these innovative ideas were developed by AJS by means of trial and error, over a period of time.
114. AJS also gave detailed evidence pertaining to the design and working of the sprocket assembly and the 'hook' or 'hakie' which he designed and made. The first part of the coiled feed chain is rolled off by hand and fed manually into a sprocket, which is used to pull the chain to the top of the induction ovens. The de-coiling of the chain into the induction furnace was problematic as the sprocket set-up required a lot of force to pull the chain off the bobbin. There was insufficient grip between the bobbin and the chain, and the chain slipped off. To solve this difficulty, AJS placed a 2nd sprocket below the existing one and the chain then ran over the top sprocket and around an idler below it and from there to the top of the 2nd sprocket, which guided it into the middle of the coil.
115. The sprockets are driven by an electric motor with inter-connected gearboxes which have the same one-to-one drive and pull ratio, to ensure an even feed of the chain through the assembly. The sprockets have a diameter of about 260mm.

There is no engineering or functional reason why they had to have that diameter, and it could have been smaller or bigger. They turned out to be that size because this was the diameter of the steel cut-outs which AJS made to the sides of the bobbins (to form flanges for the tempering process), which he then used to make the sprockets. At a later stage, to make cheaper and more durable sprockets, he had them laser cut from steel plates. The teeth of the sprockets had to be carefully placed at the correct pitch to engage and drive the feed chain around them. This too involved careful, ongoing experimentation and trial and error.

116. The “hakie” is used to hook and pull the chain through the induction oven and, after the heat treatment, through the painting plant. TS had trouble with the painting process because the chain ran at a rapid rate from the bobbin, through the painting plant, and on to the next coiler. To ensure a steady progression of chain through the painting plant the last link of the preceding roll of chain was joined manually to the first link of the next roll of chain which was due to enter the painting process. This process was time-intensive and laborious as it involved manually opening the connecting link, joining it to the next one and then hammering or knocking it closed. In 1997 Gaffie le Roux came up with the idea of using a hook or ‘hakie’ instead of this and together with AJS made a rough drawing for it which was given to Schuurman Engineering, for manufacturing of a prototype. The ‘hakie’ was initially made from mild steel. In due course it also came to be used in the induction heating process, at which time it was made from stainless steel. The size, form and dimensions of the ‘hakie’ was determined by the size of the chain link and had to be such that it could travel over the sprockets. The pitch was therefore critical. AJS was responsible for the ultimate design and shape of the ‘hakie’ to account for these functional requirements. He made a ‘hakie’ by cutting it out of a piece of steel, using a milling machine, and bending it to the shape required. Over the course of time certain changes were made to it, to improve its functioning. Le Roux made drawing of the ‘hakie’ using CADKey. The drawings are no longer available.
117. During the inspection of the parties’ respective facilities which was conducted in November 2019, AJS examined and compared the TS ‘hakie’ with that which was being used by the defendants. He found that its shape was similar and its measurements were virtually the same: the width was identical, and the thickness differed by a half a millimetre or so. A linking hook such as the ‘hakie’ could have another shape and thickness and does not have to have the same shape and thickness as the one that was devised.

118. AJS also inspected the defendants' induction and temper ovens, bobbins, coilers and decoilers, and sprocket assembly, and concluded that they were substantially the same, or similar, to those of the plaintiff. The steel structure supporting the induction ovens is substantially similar in appearance and form. The height of the generator platform is about the same. Both set-ups have quenching baths below the platform at the bottom, both have air blowers to dry the chain, both have control panels situated on the right-hand side and a temperature probe at the same height, both have the same sprockets and gearboxes and shafts to convey the chain, and the two coils are substantially similar. Both their set-ups employ two-phase induction heating (the first preheat phase and a second soaking phase), both employ wooden strips to separate the coils from touching each other, and both use soaking coils which are set up in the same manner. The FCI soaking coil mirrors the TS coil in shape and form. (There is a difference in the length of the coils).
119. AJS built the TS quench water tank, the platform for the generators and the control box for its induction ovens. To set up the entire induction heating facility and to get it to the stage where it worked optimally i.e. to address all of the problems which TS had to deal with from the outset, and to make the necessary changes and modifications to the induction heating process, took AJS and TS the best part of seven years if not longer.
120. AJS further confirmed, with reference to a drawing of part 2002, that he was responsible for certain alterations/modifications to the part, whereby the forming aspect was made more concave. The modification was aimed at increasing the strength of the linking of the feed chain. He did not make the first drawings of the progression tool or any part thereof. During the time that he was based at TS, he often discussed functional issues pertaining to the progression tool and particularly the linking part 2002, with Gaffie le Roux and Nicol van Zyl, whereafter changes would, from time to time, be made to the drawings, if required, to address these issues and to achieve better functionality. He confirmed that he was the author of certain drawings and revisions thereto, pertaining to part 2002. When making drawings, he would insert his initials and the date in the title block.
121. In designing and building the various works referred to in his evidence and his s26(12) affidavit, he used his own, original skill and effort, through an extensive process of trial and error, and innovative thinking. These works were the product of his own, independent effort and he did not copy anyone else's works.
122. The plaintiff's feed chain manufacturing plant was set up without having access to the manner and form in which competitors' plants were set up. At the time there

were no other poultry feed chain manufacturing plants in South Africa. While there were a few other manufacturers in the world, TS did not know how they structured themselves or how their manufacturing plants were set up. Consequently, the designs and set-up of the plaintiff's induction ovens (including its inner isolator and its mould and the susceptor pipe), as well as of its temper ovens (including the articulating valve and bobbins) were specific and unique solutions which the plaintiff devised, which were not publicly available.

123. During cross-examination AJS pointed out that although Dave Thomas gave input on the number of coils to be used in the induction oven for a specific frequency generator, he did not provide a design for the coil. The idea of using a soaking coil oven emanated from Mr Thomas and he provided information as to the number of coils that were needed, but the construction of the piping and its casing was designed, developed and built by TS.
124. AJS reaffirmed that the idea of using a loose inner isolator was one that he came up with. Whilst it may be that a separate inner is used elsewhere, at the time neither he nor any of the other employees of TS were aware of this.
125. AJS was involved in the construction and development of three induction furnaces at TS. The first one was scrapped. The second oven is still in use. The third one was called the "China oven". It was not welded together. AJS was not involved in building subsequent induction furnaces for TS.
126. It was put to AJS that the set-up of the parties' induction ovens is very similar because they perform identical functions and therefore they will look similar. AJS disputed this. He denied that the set-ups of the ovens will necessarily have to look the same. He said there were many ways of setting up the induction heating facility. For example the two generators could be placed next to one another on one part of the frame, and it was not necessary to put them on either side of the frame. The platform also did not need to be the same and could be designed according to preference. Similarly, the height of the induction oven frame could be much taller. He had chosen to use a height of 6m because it was convenient, as it was the length of the steel supports that were used for the construction of the frames. He used half of 6m as the height at which to construct the platform. As for the construction of the induction furnace, he pointed out similarly that although it will require a tower, it does not necessarily have to be in the centre of the structure. Whilst it was common to harden chain using induction heating, in many/most instances only one coil (i.e. one phase) would be used and not two.
127. AJS also reiterated that the sprockets need not have been built in the same way as those of TS, and that instead of using sprockets to drive and pull the feed chain

- it was possible to use other methods, such as chains and cambelts, as a drive mechanism and it was not necessary to use shafts and gearboxes.
128. Likewise, although the coils must be fixed with brass screws, they need not be fixed to a wooden frame and it. was possible to use bakelite or non-conductive plastic. The induction furnace does not have to look the same to make the same chain or similar-looking chain.
 129. Whilst it was conceded that the FCI soaking coil bore a strong resemblance to the TS soaking coil it was similarly suggested that the resemblance was attributable to the fact that they are used for the same purpose.
 130. In response to the proposition that the mechanism on the coiler which is used to level the chain when it is wound onto the bobbin is typical AJS said that (save for the defendants' coilers) he had not come across a coiling machine with such a feature, that was similar to the one on the TS coilers. It was conceded by defendants' counsel that there were substantial similarities between the parties' coilers, and their overall design and workings were essentially the same, but there were differences in their dimensions. Likewise, it was conceded that the parties' bobbins are substantially similar, although TS' bobbin has a larger circumference and is shorter. It was also put that whilst the FCI quench tank was smaller, its overall design and function was substantially similar to the plaintiff's.
 131. As to the plaintiff's application for a further amendment to its particulars of claim, AJS confirmed that in his s 26(12) affidavit he had stated that he intended to make over all copyright which he and BTM held in respect of the work which was done for TS. To this end the intention of the 15 April 2019 'Copyright Cession and Assignment' agreement' was that he and BTM would assign all their rights to TS. He confirmed the evidence which was given by TK on this aspect.
 132. AJS also concluded an agreement whereby he sold his member's interest in BTM to TS. After the sale had occurred an agreement to rectify and amend the Copyright Cession and Assignment agreement was concluded between AJS, BTM and TS. This agreement was erroneously signed on behalf of BTM by AJS although he was no longer its member. Following the plaintiff's attention being drawn thereto by the defendants' attorneys, the error was corrected by having the agreement re-signed by TK (on behalf of TS and BTM) on 24 May 2022. AJS confirmed that clause 3.1.1 of the agreement correctly reflected the common, continuing intention of the parties that all copyright which was held by himself and BTM was to be transferred to TS.

133. The Oldnalls Snr and Jnr (Derek and William) are a father and son team and directors of Thermopower Furnaces. Thermopower specialises in the manufacture of thermal heat and supply furnaces, which are used in a variety of industries including mining. Thermopower has a long-standing relationship with TS, since the 90's, and has built various convection ovens for it, which it has used for tempering its chain.
134. The first oven was a cylindrically shaped vertical unit with a fan at the bottom. TS then requested Thermopower to build an oven in which they could load spools of chain in a horizontal position. Thermopower designed a box-shaped oven for this purpose. Over the course of time TS requested a number of modifications and alterations to be made to the oven. During July 2007 CK gave instructions by email to Thermopower on details of modifications to the articulating valve, that were to be incorporated in the next oven that Thermopower was to build for TS. included in the e-mail were photographs pertaining to the proposed modifications.
135. Olnall Snr did the design work and specifications for the box oven (including the power distribution, speed of the fans, size of the impellers, quantity of elements and their power ratings, theoretical calculations and mechanical design) from photographs and instructions that were given by employees at TS, including CK.
136. Draughtsmen in the full-time employ of Thermopower made the engineering drawings of the oven. Thermopower has not made another temper oven that contains the same inner configuration and specifications as the TS oven. TS's design solution for its convection oven was 'novel' and unique to it. The manner in which the circulation of hot air is carried out in the TS temper ovens via a plenum plate at the back of the oven and through an articulating valve around the sidewalls of the oven and over the heating elements, to distribute the airflow, are key components of the TS oven.
137. In December 2018 Thermopower concluded an agreement of cession and assignment to TS of the copyright which vested in the drawings and works it had done. An addendum thereto was entered into in September 2020.
138. At a stage, photographs of certain of the ovens which Thermopower had made for TS were posted on Thermopower's Facebook page, as a promotional and marketing exercise. They were taken down immediately when TS became aware of them and complained. The images that were published were of the exteriors of the ovens, from which none of the key design criteria unique to the TS set-up were visible. Thermopower is very careful about the images it posts on its Facebook page, to ensure that it does not publish its intellectual property and 'trade secrets', or those of its clients, in the public domain. Consequently, photos

of the TS ovens were scrutinised to ensure that confidential aspects of their design and functionality were not revealed to the public.

Forrester de Beer ('FDB')

139. FDB is a qualified mechanical engineer specializing in process engineering. He gave detailed evidence pertaining to the plaintiff's manufacturing process for the production of chain. Given the extensive evidence that was provided on this by the previous witnesses, in order not to burden the judgment with unnecessary repetition his testimony on this aspect will not be repeated, save where necessary.
140. FDB concluded that a significant amount of effort, time and development had gone into the plaintiff's manufacturing process, which he described as a 'batch' manufacturing process which was continuous in parts. The stainless steel which the plaintiff uses is manufactured locally. It is not a high alloy steel and is used generally in making tools and agricultural implements. There are other grades of stainless steel, or higher alloy steels, that could have been used, but there would be a trade-off between cost and manufacturing requirements and the process would have to be adjusted to suit the material.
141. The chain is formed by a progression tool, which is essentially an 'eccentric' press which has a very large cam, which exerts 80 tonne pressure. The press progressively cuts, shapes, forms and links the raw material. The progressive forming of the chain starts in the press, where each punch cycle forms an element of the shape which is required, before the final link-forming and closing is done. The TS progressive tool has six steps. The critical part in the progression tool is the linking part/component part 2002, which is used to form a tang in the links, which shapes the steel from one link to the other. The linking part/component is a very innovative and unique tool. It would have taken a lot of money, time and effort, to develop it to the point that it was properly operational and reliable so that it formed chain to the correct specifications. The linking part would have been developed by first making drawings of the tooling, then machining a very expensive block of steel and working on it incrementally over a period of time, to the point where it punched and formed chain links to the requisite specification. This would not have been a simple process and would have taken a lot of development. The forming and linking process it is to carry out is complex and requires several steps, each of which had to be carefully designed and engineered. The 'horn' of the linking part is polished so that the steel can slide over it smoothly and with the least amount of stress on the tang as possible, because if the steel is stressed the material will be extruded which will result in a weak chain. Neither part 2002 nor the horn is in the public domain. Its three-

dimensional shape is quite unusual and is not something that can simply be designed on a CAD system. To arrive at the part would require a trial-and-error process of punching, fiddling, filling, hacking, bashing and machining until the toolmaker got it right, at which time the part could be reverse-engineered for drawings to be made, for the future production of the part. It would have required a lot of effort, experience and hard work to produce the particular shape and dimensions which the part has. Given its complex and undulating shape, measuring its dimensions using instruments such as a vernier or micrometer would be near impossible and a 3D measuring system would have to be used to reproduce them.

142. The induction heating technology used by TS is dated. The new technologies that could be used in its place would include laser heat treatments and other non-contact heating technologies. Induction heating is probably more economical than flame-hardening or conventional radiation heating by means of an electrical element. The specific induction heating process and set-up developed by TS is not generally available and is unique. TS would have spent quite a bit of time and money developing its induction ovens, which are not ovens that one can buy off a shelf. After preparing an assembly drawing one would have made a prototype, tested it, fiddled with it, tweaked it and spent a lot of effort, time and money getting it optimised for the manufacture of properly hardened feed chain. While induction heating is not a unique process, the application of induction heating in this instance is quite innovative. A chain of unusual shape and complexity is carefully heated, homogenously, in such a manner that the outer extremities or wings are not over-heated at the expense of the tang. The inner isolator mould was particularly developed for this process and is not available in the public domain.
143. Equally, to get the chain to temper properly and evenly whilst it is coiled on a bobbin, was not easy. TS came up with the innovation of driving warm air through the stem of the bobbin and the chain on it to speed up the tempering process. The tempering oven has a fan and articulating valve which are used to drive hot air through the bobbin as efficiently as possible. This solution also would have taken some development and tinkering. While the tempering process is well-known, the unique solution which TS arrived at is not in the public domain. Commonly, tempering is done in a large, walk-in convection oven with a door, with the material which is to be heat-treated placed in a basket in the middle of it. Where large objects which are difficult to move must be tempered, large ovens are placed over them. Dropping objects into an oven through the top is not a

standard way of tempering. The manner in which TS tempers its chain is not the only way to do it and was a specific and unique solution for it.

144. In cross-examination it was put to FDB that the general process flows of the TS and FCI plants are logical and were determined by the nature of the raw and end-products. Whilst he agreed with this statement as a general principle, he pointed out that the process flow would vary and would not be the same, depending on how components of the production process were made. It was also put to him that his conclusion as to the improbability of another designer producing a facility that was the same as a competitor, was predicated on the assumption that the designer had no experience in the industry, and this was not the case in this matter, as CK had been employed by TS for over 10 years, so 'he did not have to reinvent the wheel'. Likewise, it was also put that someone with inside knowledge of the principles of the processes involved would have easily been able to design aspects thereof from looking at the TS promotional video (which was shown at trade fairs), and from looking at the photographs of the TS temper ovens that Thermopower placed on Facebook. He agreed that such a person would be 'well-armed', but pointed out that if they did not have inside knowledge of TS' set-up and know-how, they would not be able to replicate its processes and would still have to do a lot of trial-and-error work to get the ovens to work optimally, and it would not be an easy task.
145. He was not aware that decoilers were off-the-shelf items that could be bought from engineering suppliers. (As is apparent from what is set out above, the TS decoilers were not bought off the shelf and were designed and custom made by AJS, after considering a number of specific factors, which were particular to the plaintiff's production process). He agreed that, whilst an eccentric press was a standard industry item, what distinguishes one production line from another was dependent on what was inside it and how its workings were configured.
146. In similar vein, he agreed that the use of a reel or bobbin was common when dealing with materials such as cables, cords, and chains and that the parties' respective bobbins were substantially the same, but not identical in every dimension.
147. As regards part 2002, it was put to him that it was necessary to have it to produce the shape of the chain links. FDB was of the view that there were other ways of doing it, but he did not have another simple solution in mind.
148. Regarding the inner isolator it was put that one could buy refractory liners or refractory mouldings from suppliers. FDB did not dispute this but doubted that if

one bought such ready-made items they would be in the shape of the plaintiff's isolators or moulds, and he had never seen any that looked like that.

149. Likewise, whilst he agreed that there might be suppliers who would be able to supply induction coils like the ones used by TS, these would not be off-the-shelf items and would have to be built to specifications that were provided.
150. In re-examination, FDB was referred to the averment in CK's affidavit that he did not copy the TS production line and the design of FCI's plant was the result of independent thought and innovation. He disputed this and maintained that in his opinion it was not the result of independent and original work and effort, as there were so many material similarities or commonalities in the processes, equipment and material. In his view, original thought and independent effort would have resulted in a different outcome.

Burger Coetzee ('Coetzee')

151. Coetzee has been employed as a design engineer at TS since March 2016. He was present on 7 October 2020 when the FCI linking part 128 was inserted into the TS progression press, in place of its part 2002, and took a video of the exercise.
152. During September 2020 he was given a folder of the drawings that were found on CK's Mecer, HP and Dell computers during the Anton Piller search, and was asked to consider the Arsamkar Tehran (Moradi) strip drawing (A9-2988) that was found on the HP and compare it with the plaintiff's strip. To do this an 'expanded' drawing of the Arsamkar strip was made (A9-2986) and he also made a drawing of the plaintiff's strip on 10 September 2020 (A9-2987), from a top view perspective of the bottom part of the TS tool. He used Solid Edge software to do this. To make his comparison he performed certain measurements on the Arsamkar and TS drawings and marked 16 corresponding points on them, in respect of which he compiled a table in which he set out the dimensions they represented. Based on this comparative exercise he arrived at the opinion that the Arsamkar and TS drawings were substantially 'identical.'
153. Coetzee also confirmed that he was asked to examine and compare a drawing that CK provided to Feltham (A3-921), with the drawing of the Asamkar Strip (as expanded), that was found on CK's HP computer. In his opinion the drawings were also substantially identical.

Joseph Johannes Du Toit ('Du Toit')

154. Du Toit is employed by TS as its sales manager. He is responsible for all aspects of sales, including orders, prices and issues pertaining to competition, and communication between the production and sales departments. He knows TS's

customers and regularly liaises with them, both at international trade shows and when he meets them for sales and marketing purposes.

155. In January 2016 he was informed by Peter Kinnear from Reliance Poultry, a customer of TS, that FCI had solicited business from it, in competition with TS. Over the course of time It became apparent that FCI' activities were not confined to only this customer, and they had approached several others and had offered to sell them chain at prices that were lower than those offered by TS and were doing business with them on that basis. The impact of FCI's entry into the market caused a reduction in TS's market share and effected its profits.
156. Also in 2016, while Du Toit and TK were at a trade show in Hanover, Germany, representatives from Jiade, one of TS's Chinese customers, showed them an FCI business card which had been given to them by the defendants, in an attempt to solicit their business. A few months later Jiade asked Du Toit to provide a competing quote, in USD, for a container of feed chain. Jiade was unwilling to reveal the identity of TS' competitor but after some to and fro it reluctantly provided Du Toit with a copy of their quote, from which he was able to determine that it emanated from FCI, as its logo was on it. The price which was quoted by FCI for feed chain was between 6% - 8% less than TS's price. TS had to lower its price accordingly to retain Jiade as a customer.
157. In August the following year it came to light that another customer Mr Baiyin had been approached by CK/FCI and was doing business with it. From one of the emails which were disclosed by Baiyin, which he had received from CK, it appeared that CK had told him he could offer chain at a price of \$1.90 per metre, compared to the \$2.02 per metre that TS was charging. Thus, it was evident that CK were competing unlawfully with TS by 'stealing' its customers and undercutting its prices. In a further email to him CK claimed that TS was lowering its prices because it knew that FCI offered a better-quality product.
158. Du Toit gave detailed evidence pertaining to the average price for feed chain which was charged by TS over several years, which showed how it had to consistently lower its price per metre in respect of certain customers from a high of \$2.39 in 2015 to as low as \$1.72 in 2020 and \$1.79 in 2021, to compete with FCI and prevent it from stealing its business. It also had to constantly monitor and re-engage customers whose volume of repeat orders decreased because they were doing business with FCI and had to reduce prices to retain them. The wrongful actions of the defendants caused TS to suffer considerable harm and loss, in financial terms.

B) The defendants' witnesses

Helmut Charles Bowles ('Bowles')

159. Bowles has a bachelor's and master's degree in mechanical engineering from the University of Cape Town. His evidence mainly concerned the processes used by TS and FCI in manufacturing chain and the principal components by means of which they did so, including the parties' linking parts, sprockets, inner isolators and their moulds, their induction and temper ovens and quench baths, and their bobbins and coilers/decoilers. Given the evidence that the previous witnesses gave in this regard, it is not necessary to recite it.
160. He attended the inspection of the parties' manufacturing plants in November 2019. His evidence in chief was largely a repetition of the contents of his report, in which he confirmed that the components referred to were substantially the same/similar, but there were certain (non-functional) differences, principally pertaining to their dimensions i.e. their height, width and length. As a result, in his view because of these differences they were not copies. It was thus apparent from his evidence that he understood a copy to be an exact replica.
161. Nonetheless, he confirmed that 1) the overall manufacturing process used by TS and FCI were substantially the same 2) FCI's plant incorporated the same 'technical solutions' as those utilized by TS 2) FCI's parts and components were substantially the same/similar to those of TS.
162. In his report he expressed the opinion that it was probable that an independent designer, having no prior knowledge of either facility, would arrive at a substantially similar, if not identical process flow and overall solution given the processes they were using. Thus, not only would the components of the plants be substantially the same at a high level, but it would be expected that even at the level of relatively fine detail, the plants would inevitably show striking similarities. So, insofar as the TS and FCI's induction furnaces were substantially the same, this was to be expected because they performed the same function.
163. During his evidence he conceded that he had never seen any other feed chain manufacturing facility, aside from those of the parties. He also conceded that aspects of the process need not have to be the same or substantially similar. Thus, he conceded that the most efficient way for FCI to have set up its second induction furnace would have been to have an oval-shaped coil, and the fact that CK used round coils shows that he didn't apply any independent thought, but simply followed TS's 'recipe'. Likewise, he conceded during cross-examination that tempering by way of induction would have been the optimal way to maximize production, instead of having separate induction heating and convection heating ovens. Contrary to his report and earlier evidence, during cross-examination he

conceded that it was not probable that two independent people, without prior knowledge of either the plaintiff or the defendants' facility, would produce substantially similar, or identical progression tools to make chain. He also conceded that part 128 did not have to replicate part 2002 but sought to justify its mimicking of part 2002 on the basis that CK did not have to 'reinvent the wheel' when it came to the part, as he knew the solution from working at TS. Whilst this may be the most likely and logical explanation for why CK sought to replicate the plaintiff's linking part it does not mean that, as a matter of law, he was entitled to do so.

164. Bowles also conceded that TS' bobbins served as a design reference for FCI's bobbins. Finally, although in his report he stated that there were substantial differences between the moulds for the inner isolator, he agreed that the overall impression was that they were substantially the same/similar, as were the inner isolators and the soaking pipes.

Roelof Johan Mostert ('Prof Mostert')

165. Prof Mostert is a metallurgical engineer and Head of the Dept of Material Science & Metallurgical Engineering at the University of Pretoria. He was previously employed as head of the heat treatment & surface engineering section of Littleton Engineering, a division of arms manufacturer Denel, and before that was a research officer for Iscor.
166. He gave evidence on the general principles applicable to the heat treatment of strip steel, to harden and temper it, using the processes of induction and convection heating. Given the extensive coverage which these aspects enjoyed in the testimony of the previous witnesses it is not necessary to repeat his evidence in this regard.
167. During his testimony it transpired that Prof Mostert and the 2nd defendant have known each other for several years and Prof Mostert did consulting work for FCI/ 2nd defendant in 2015 in relation to the auger dispute. He was later also asked to analyse some of FCI's chain links that had fractured during testing.
168. In 2018 he appointed 2nd defendant to be an external examiner for one of the modules which his students were doing, which required them to do a research project to develop an improved design for the manufacturing of feed chain. Clearly, the topic was one which would have been of interest to 2nd defendant at the time, and the results would have been of use or benefit to him, so he had a clear interest in the project. In the report which the students prepared which is date 7 June 2018 they compared the TS and FCI chain markets (an area involving

confidential commercial information) and commented that FCI was aiming to take 15% of TS' global market from it. This information must have come from FCI.

169. In their report the students proposed a heat treatment solution which differed from that which TS had adopted. They proposed a single, continuous 'in-line' heat treatment whereby the chain was subjected to induction heating and tempering, in one and the same induction furnace, and none of the particular features of the TS induction or temper ovens were suggested as part of this solution. The treatment proposed by the students was vertical induction heating in a coil using a generator which produced a working frequency of 100 KHz for hardening, without a second stage soaking coil, and thereafter a tempering process at a frequency lower than 100 KHz to achieve a penetration depth of at least 1.2 mm at 200 degrees C, with the chain being unloaded into a box or onto a pallet, thereby doing away with the need for transportation of the chain on bobbins, to and from separate induction furnaces and temper ovens. During cross-examination Prof Mostert agreed that an EFD video which was shown proposed a similar solution (using two induction heaters), and both of these solutions (that proposed by the students and that proposed in the EFD video) were feasible i.e. viable.

Alan Grant ("Grant")

170. Alan Grant of LH Power is a specialist in heat treatment solutions, including induction heating systems. TK approached LH Power to devise an induction heating system, for which it had to do a series of calculations and experiment with several 'dummy' coils before eventually coming up with a solution that worked for the plaintiff. It also had to assist the plaintiff to commission its induction furnaces.
171. The optimal shape coil for the heat treatment of feed chain is one that approximates its shape, as closely as possible, because the closer the chain is to the coil the more uniform and even its subjection to the heat which is generated by the coil, as it passes through. Given the shape of the feed chain an oval shaped-coil would therefore be better than a round- shaped one. The other variables that determine the dimensions and design of the coil are the induction power supply/KW frequency output of the generator, and the rate at which the chain is passed through the coil.
172. The 2nd defendant also approached Grant and asked him to manufacture two induction coils, with very specific dimensions and specifications, which were to be used for the two-phase heat treatment of feed chain. The design of the coils which 2nd defendant submitted, and their set up, mirrored those of TS, even to the extent

of having oval-shaped coils for the first stage furnace and circular-shaped coils for the second.

173. During cross-examination Grant agreed that with the current technology that is available both the hardening and tempering processes can be done by way of induction furnaces and there is no longer a need for separate tempering ovens. Thus, the continuous, single inline heating solution which was proposed/referred to by FDB and Prof Mostert was not unreasonable. Such a solution would obviate the need for a second, soaking coil and separate temper ovens.

Peter Feltham ('Feltham')

174. Feltham is an expert toolmaker with many years' experience, who operates from Port Elizabeth under the name and style of Tool & Die Solutions. It is common cause that in July 2015 the 2nd defendant, Kurtz, requested him to assist with the design of a progression tool, which could be used to cut, shape, stamp, and form connected links for feed chain from 70 mm wide stainless-steel strips. Feltham uses CAD and Autoform software to design tooling and dies.
175. Over the course of the 10 months that followed, Feltham and Kurtz corresponded in respect of the project, by way of hundreds of email communications. A large volume of the emails that they exchanged was traversed, in the most excruciating and unnecessary detail, during days of evidence. It is not practical or feasible to do the same here, and an attempt will be made to lift out only the most salient features of their communications.
176. At the outset Kurtz sought an assurance from Feltham that the work which he did would be subject to confidentiality, which was duly given. The 2nd defendant was also concerned about the protection of copyright in the drawings that were to be produced for him by Feltham. Peculiarly however, he asked that Feltham refrain from the standard practise of including the name of the author and the dates of the creation of the drawings on them, although he wanted the copyright symbol to be in place to indicate copyright protection.
177. During a visit to Feltham he provided samples of links of chain, which Feltham then scanned. Feltham then turned to working on the first step in the design process viz. the conceptual and schematic lay-out of a progression strip, which would set out each of the proposed steps that would be taken in the process of manufacturing, including stamping, cutting, shaping and link-forming. The progression strip would then be used to design each of the components of the progression tool that were needed, to perform the steps on the strip. To assist him with this task 2nd defendant provided Feltham with a metal sample strip and a conceptual 2D strip layout drawing in PDF (A3-921), which by the defendants'

own admission was 'modelled' on the plaintiff's strip progression. He also provided Feltham with a pitch dimension that was required, of 44.45mm.

178. The commonalities and similarities between the A3-921 strip and that which Feltham subsequently produced for the defendants were canvassed during cross-examination. Despite this, he was seemingly reluctant to concede these and to concede that by providing him with A3-921 Kurtz had in effect asked him to design a progression strip which copied or 'modelled' that of the plaintiff. Even when it was put to him that he used A3-921 as his reference point and made some adjustments to it, he answered that he used it simply as a 'basic starting point' and denied that it had a 'definite influence' on his design. When asked to point out the differences between the progression strip he made for the defendants and that of the plaintiff, other than an extra idler at steps 2 and 8, and slightly more bend in forming the lip of the link at step 7/8, Feltham was unable to identify any others. Despite the clear and obvious substantial similarity between the A3-921 strip, the plaintiff's strip, and the strip which he made for the defendants Feltham tried to suggest that the defendants' strip looked like the VDL strip, with the only difference being in the lacing which it had. However, when pressed he eventually conceded that they were different, and the progression which he set out for the defendants' strip does not allow for lacing, as the link is severed from the strip before it is formed, unlike that of VDL.
179. Despite the use of sophisticated software and notwithstanding his evident skills as a toolmaker, he could not conceptualize and design the link curling/forming and closing part of the progression, which seemingly confounded him, and he struggled with it. Even after spending some time on it he said in emails to the 2nd defendant that he still did not understand '100%' the linking and cutting operation he was required to design. On 10 September 2015 he told 2nd defendant that he was still trying to get his head around the work. By early 2016 he had produced several iterations which were still not workable. It is evident from the emails that to move him towards a solution 2nd defendant constantly guided him. The emails reflect that the assistance which he gave throughout their interaction was not just at a conceptual level but went down to the nitty-gritty i.e. to the point of giving fine dimensions.
180. But even with this assistance Feltham was still unable to fully conceptualize what was required by the linking part. At this point he was referred by Kurtz to the photograph of the plaintiff's linking part 2002, which was on the TD Coating website. According to Feltham he was 'directed' to the part and instructed that he 'needed to create something similar' to it. During cross-examination he conceded

that in fact he was required to replicate the plaintiff's part 'as closely as possible'. However, even with this assistance he was unable to produce a properly workable linking part, and in April-May 2016 the 2nd defendant approached MTD for help. When asked on what basis he thought he was entitled to copy the plaintiff's part he said he thought he could do so as the photograph of it was on a public website and thus, as he understood it, the part was therefore in the public domain. He was visibly shocked when plaintiff's counsel informed him that his understanding was not legally correct and the fact that a photograph of the plaintiff's part appeared on a website did not mean that the plaintiff no longer enjoyed intellectual property rights in it.

181. During cross-examination Feltham maintained that parts 2002 and 128 were 'completely' different in shape and appearance, whilst also conceding that they looked the same and were very similar, albeit not identical. In fact he said they were so visually alike that he could have confused them. As Bowles did, he also maintained they would logically be very similar as they were required to perform the same function and to produce the same product.

Christiaan Arnoldus Kurtz ('CK' or 'Kurtz')

182. When Mr Kurtz commenced employment with TS in 2001, he had completed the theoretical portion of his mechanical engineering diploma. His practical examinations were still outstanding. He had some general engineering experience. After completing a project at TS under supervision he obtained his diploma in December 2001. He was first employed by TS as a technician and from 2005 onwards as a plant engineer. He was involved in the flat wire, auger and feed chain production lines.
183. Over time, he worked with the plaintiff's progression tool, bobbins and coilers/decoilers, induction heating furnaces and temper ovens. He learned how each of these worked and about their different components. He attended to break-downs in the plant and assisted the artisans with repairs. He also had to arrange spares for all the machines in the plant. He worked daily with drawings for these machines and their components. He had to check details on the drawings, including tolerances, sizes and dimensions of the parts depicted on them. He worked on AutoCAD on a desktop PC he was provided with. He also worked at home on his personal laptop. NTB provided him with packs of hardcopy drawings as well as a disc on which they could be stored, from which he could transfer the drawings onto his desktop computer.

184. He had unfettered access to the entire factory, which was open to all. He was not restricted or prohibited from working with any component or any part of the plant. He became familiar with every machine, and every part of every machine.
185. During 2005 he signed a confidentiality agreement with TS, which included a 3-year restraint of trade clause in it. It is common cause that the agreement specified the confidential information of the plaintiff as including its know-how pertaining to its manufacturing process which was unique and confidential to it as well as its drawings and designs.
186. When he was promoted to plant engineer, he became responsible overall for the machines in the auger and feed chain production plants. He was entrusted with ensuring that there was maximum 'uptime' and worked on the continuous process of improvement and upgrading of the machines to get them to run faster and more reliably. Apart from this his duties included obtaining quotes, negotiating prices and placing orders for machine parts, making technical drawings on AutoCAD and ensuring that technical drawings were configured in compliance with international standards, and maintaining plant and equipment.
187. During his tenure with TS he ordered two complete press production lines from Reef Engineering. The components included a 160-ton eccentric press, a strip decoiler, a flattener and a strip feeding unit, which is the same as the one currently being used by the defendants. These items are standard items that can be acquired ready-made, save for the levellers or flatteners, which are custom made for the strip steel industry.
188. TS made its own bobbin coiler. There were no drawings for it because it was 'simple' to manufacture. The artisans simply needed to measure the width and the length of the bobbin, add rubber rollers, and weld the components together
189. TS fabricated some machine parts and outsourced others. Most of the machine parts for the feed chain plant were manufactured in its own workshop including the larger components of the tool and the dies. MTD made some of the smaller parts for the tooling. It was Kurtz' job to get quotations for the parts that were not manufactured inhouse and to provide drawings of them to the engineering companies who were responsible for their manufacture.
190. When Kurtz started at TS there were two vertical induction furnaces i.e. coils. The first, top coil was used for the first stage pre-heating. Once the feed chain exited the inner isolator or 'liner' of the 1st coil, it entered a susceptor pipe in the 2nd coil which was made by welding together two L-shaped st-921ainless-steel grade 3.10 sheets. Both induction heaters operated at a medium frequency. In about 2008 he, together with artisans who reported to him, added a third induction coil

oven above the existing two. It was a high frequency induction heater. This was done so that more chain could be heat treated, to increase the output from about 104 links per minute to about 130 links per minute. The feed chain travelled up and over a sprocket at the top of the ovens and into the high frequency induction heater, and then proceeded through the other two medium frequency induction heaters.

191. Regarding the essential attributes required for feed chain, Kurtz noted that (1) it had to be 70 mm wide because the trough that it travels in is 80-90 mm wide (2) it had to be 2.5 mm thick to be strong enough (3) the pitch of the chain i.e the distance from one link to another, had be 42.4 mm to accommodate the sprocket that drives the feed chain in the conveying trough, which has a certain pitch and (4) the area where the links join with one another requires a 12.5 mm radius. In addition the chain must have a hardness rating of 48-50 Rockwell C, which is the same rating which the McAuley chain has. To obtain such a hardness rating it is necessary to heat the chain, which is made locally from SAE 1030 grade steel, to between 860 and 900 degrees Celsius, and to quench it in water. Kurtz obtained the dimensions referred to from a sample of McAuley chain, which he was able to measure and test for hardness.
192. Kurtz left TS at the end of February 2009 as he had decided to go into a business venture with 5th defendant and Colenbrander, which was to be carried out via the 4th defendant CGC Industries (Pty) Ltd ('CGC'), which was an acronym for their first names Carl, Gary and Chris. CGC had been registered the year before and traded under the name 'RTS', which stood for 'rod to spiral'. RTS used steel rod to manufacture spiral auger. The idea was to import flat wire from China where it could be purchased cheaply and make auger with it. However the sample flat wire they obtained from China was too soft and they had to source it from elsewhere.
193. For him and Colenbrander to operate outside their restraint area, they intended to build the auger manufacturing equipment in SA and transport it to Windhoek, Namibia. They developed, tested and set-up auger machines in SA and researched the cost of transporting the raw materials to Windhoek. They also paid a deposit on a building they had secured outside of Windhoek. However, a few weeks before they were supposed to move to Namibia they decided not to do so and to stay in SA, and around August/September 2009 started manufacturing and selling auger in SA. Colenbrander was responsible for marketing and sales, 5th defendant was the financier and Kurtz was responsible for manufacturing. Although Colenbrander immigrated to Australia in August/September 2009, he still handled sales and marketing for CGC and attended several trade shows in

different countries to market its product. Over the course of time Kurtz learned more about marketing and sales and got to know the customers.

194. After becoming aware of CGC's activities, TS and its holding company Lavirco Beleggings (Pty) Ltd instituted proceedings against it in 2014, whereby they sought an order interdicting it from making use of the confidential auger manufacturing processes of TS and the auger works and drawings in which it had copyright.
195. It is common cause that this application, which was referred to as the 'auger' matter, was settled in 2015 in terms of an agreed order whereby TS was granted far-ranging interdictory relief and CGC was directed to deliver up the infringing works and drawings and the equipment and machines used to produce them. To this end the order made provision for the appointment of an expert who would inspect the machinery and equipment and determine whether it infringed the plaintiff's rights and/or the terms of the order. Consequent to the obtaining of the order some of the CGC machines had to be seized and removed. According to Kurtz, instead of an inspection process being carried out by a suitable, independent expert, TK attended at the premises of CGC with NTB and a team of TS employees and purported to act as the expert and to point out certain items of machinery that were removed. No report was filed as to this, as was required by the order. When this happened Kurtz told TK that he would now have to make feed chain.
196. In fact already after the 2015 order had been obtained against them 5th defendant had suggested that they should start manufacturing feed chain. In 2018 Kurtz visited VDL, a feed chain manufacturer in the Netherlands. They 'opened' their VDL tools for him to see what they looked like.
197. During his evidence he was referred to several of his emails which were dated earlier than emails they had been sent in response to. He explained that the reason for this was that he had used a trial version of AutoCAD which was only available for use for a certain period and, in order be able to continue using it after that, he had set the operating date back on the BIOS of his Mecer laptop, by two years.
198. He admitted that he had used the template title block frames which TS used on its technical drawings, and some of their 'tolerances' i.e dimensions on AutoCAD, for the auger and flat wire plant he set up. He also admitted that TK's emails had been unlawfully monitored and intercepted after Colenbrander had obtained TK's password from an IT technician at Lavirco.

199. Her confirmed that already in 2013 various offers were made by CGC t/a RTS to Mr Moradi of Arsamkar, a customer of TS in Tehran, which included an offer that CGC would supply it with the know-how to manufacture feed chain and provide the necessary expertise to set it up, in exchange for commission on sales.
200. After they decided they were going to make feed chain, Kurtz went about looking for a second-hand eccentric press which they could acquire and in due course he made contact with Feltham, an expert toolmaker who traded from Port Elizabeth under the name and style of Tool & Die Solutions. He asked Feltham if he could make a progressive die for a 2.5 mm thick by 70 mm wide stainless-steel strip, which had to be punched and formed into interlinking links of a chain. He e-mailed Mr Feltham a photo of a McAuley chain link and sent him a sketch AutoCAD drawing of a piece of McAuley chain, which he had taken from its website and adapted, by adding certain measurements and dimensions which he had obtained by measuring McAuley chain which he had in his possession. He also sent Feltham an image of some parts laced together.
201. Regarding the drawing at p921 of trial bundle A3, which he made using AutoCAD and which he had sent to Feltham, Kurtz testified that it was based on the strip which he had seen at TS because that was the only chain company for which he had worked. When asked to explain how he arrived at the drawing he said that he 'just drew it' because he knew the different steps that were required. He knew that one had to end up with a chain link and, to get the chain link one had to side punch, slot punch, crop the lip off and bend it into a radius of 10 degrees at the bottom and a radius of 12 degrees at the top; then bend the S-profile into the chain link; and chop the link off. Having worked at TS for 8 years he knew exactly what steps to follow in the progression.
202. He agreed that the drawing shows similar progressive steps in the manufacture of chain, as he had seen at TS. It took him a couple of hours to draw and measure it up. As regards the dimensions he incorporated into the drawing: (1) the 70 mm width dimension he knew from when he worked at TS and could measure its chain (2) the same goes for the thickness width of 2.5 mm which, although it was not reflected on the drawing can also be measured from the chain (3) the 12.5 radius he suggested for the 'bearing surface' of the chain was the same as that of the McAuley chain. He claimed that he used a combination of TS and McAuley chain links for the drawing save that he made the knuckle curl a bit wider to make the chain stronger. To this end the slot dimension of 5.9mm was slightly narrower than both the McAuley and the TS slots, which resulted in the middle part of the link being wider and thus stronger than either of the others. Other dimensions were

- made and inserted into the drawing by AutoCAD which automatically provides dimensions when one clicks on two points in a drawing, provided it is to scale.
203. He disputed NTB's assertion that the only way in which he could have made the drawing would be if he had made use of a physical TS strip or die master or a drawing thereof. He said that no evidence had been tendered of any such drawing and no such drawing had been discovered by the plaintiff.
204. As to the pitch dimension of 44.45 mm, which he gave to Feltham, he recalled that at TS they had programmed this dimension into the server feeding units, which feed the steel strip into the progressive tool. The pitch dimension is the distance that the steel strip must proceed in the tool for each progressive step, per cycle. At TS, they used to put in 44.5mm and sometimes 44.48mm or 44.52mm depending on the amount of wear on the roller. It was possible to make such small adjustments on the amount of strip being fed into the progressive tool. He also knew that this was the pitch used by McAuley, from its original patent, which is expressed in imperial terms as one-and-three-quarter inch, which is 44.45mm when converted into millimetres.
205. He and Mr Feltham underwent an iterative process in the design of the progression tool. They were constantly 'changing' the parts and their profiles and shapes to get to the result and shape that he wanted. They made use of TeamViewer so that Feltham could show Kurtz his designs. Later Feltham asked him to download 3D.xml, so that he could send him three-dimensional designs. Using it Kurtz was able to view the designs from different angles and perspectives but could not edit them. He was taken, at some length, through a host of emails which he exchanged with Feltham, where he provided him with detailed instructions, measurements and dimensions. On one of these, which contained a sketch he made of the front view profile of a chain link, he had set out the arc of the curvature and certain radii required. He admitted also that he had directed Feltham to a photograph of the plaintiff's linking part 2002, which was on the TD Coating website, to assist him.
206. At the end of the process Feltham provided digital three-dimensional drawings for the various components of the progression tool, via Dropbox. Kurtz asked for a set of two-dimensional drawings to also be provided, as he wanted to be able to work on and make revisions to them. Special software was required to work on the three-dimensional drawings, which Kurtz did not have. He only had a version of AutoCAD which could work with two-dimensional drawings.
207. When the drawings necessary for manufacture were complete, he commissioned Correct Engineering in Uitenhage, via 3rd defendant, to manufacture the first

progression tool, using Feltham's 3D files. By April 2016 a prototype had been received from Correct Engineering. They ultimately produced about 3 or 4 iterations of it. The prototype was not able to produce acceptable chain, as the gap between the links and the lip of the knuckle was still too big and not round enough, and the sides of the back of the chain were being damaged by the tool. In an attempt to fix the problems relating to the gap between the chain link and the lip of the knuckle, additional material was welded to part 128, which was then ground to shape using an angle grinder as well as a pencil grinder for the fine work. But the part still did not function as it should and the shape of the finished knuckle it was producing was not like that of either the McAuley chain or that of TS. Kurtz then asked Feltham to make modifications to the design of sub-parts 123 and 223, which were responsible for forming the lip, to get the arc of the chain as close to the McAuley chain as possible.

208. In May 2016, Kurtz approached MTD to work in parallel with Correct Engineering on refinements to parts of the tool, including part 128, and to make certain parts. He had various iterations of part 128 and thought that if Correct and MTD worked in tandem, they would get a quicker result. He approached MTD because there were a lot of parts that needed modifications or had to be redesigned and built from scratch, and he needed someone that was able to do precision work, and not the rough work that he was doing by welding up and grinding down. He contacted Clive Coenraad of MTD, who he knew from the time when he was at TS, when MTD had done work for TS. He took several of the parts that required work to MTD and explained to Coenraad what was required to be done on them. He marked areas on the parts that needed to be removed. Some of the parts that MTD made (such as part 128 in particular), were sent to TDK Coating, where a special coating was applied to them under heat. This could only be done in the final iteration of the part. According to Kurtz, the FCI progression tool is 'completely different' (sic) to that used by TS. It is longer, has more parts and works 'on a different principle'; the FCI tool works on five horizontal levels whilst the TS tool works on three.
209. The chain which was first produced in the second half of 2016 using the progression tool was not of an acceptable quality, as they experienced problems with heat treatment. By the end of 2016, beginning 2017 these had been resolved and FCI was able to make its first sales of feed chain of an acceptable quality.
210. Because of the poor financial status that CGC was in at the time, it was decided to use the 3rd defendant, C Quiptech for the feed chain manufacturing operations. The 5th defendant agreed to fund it. It trades under the name 'Feed Chain

- Industries'. Kurtz is its sole director and he and 5th defendant are equal shareholders in it. Colenbrander does not have any involvement in C Quiptech.
211. With reference to the remaining components of the defendants' production line Kurtz gave the following evidence. The defendants acquired a second-hand strip decoiler with a ballerina arm from Erin Machine Tools. Kurtz designed a strip feeder for it (which includes rollers, the plates that hold them and the cover that goes over the timing belt together with the pneumatic cylinders on the top of it). ElectroMechanica built the control panel and supplied the electronics for the server motor, which is used to feed the strip into the progressive tool. Whereas TS makes use of levellers in-between the strip decoiler and its server feeder, FCI does not.
 212. As regard the bobbins, Kurtz admitted that he adopted the same solution as that which is in use by TS. As in the case of the TS bobbin the FCI bobbin has a hollow core stem which has holes in it, which is wrapped in mesh, and one side of the bobbin is open and fits against an articulating valve, like the TS bobbin. When asked why he chose this manner of dealing with the bobbin, he said that it was a good practical solution and 'he knew how to do it', so he did it. The holes are there to ensure that the air flows through the chain when the chain is tempered, and the metal mesh is to prevent the chain from going into the holes.
 213. He designed the bobbin coiler, and it was built at 5th defendant's workshop at Quarry Tech. According to him it is a very 'simple' machine. One could probably purchase the steel for it from any steel shop and weld the machine together. It consists of two shafts, four rollers, four pieces of angle iron and four plumber's blocks.
 214. He was also responsible for the design of the supporting frame for FCI's induction ovens. As in the case of the plaintiff it was made from channel iron of 6m in length, and the platform was built at a height which was half of that. He settled on induction heating as a solution for hardening chain because he knew from his experience at TS that it was a good solution, so he did the same. The orange-coloured induction generator which is visible on the photographs was built and designed by Paul Lutchman from Johannesburg, who he also knew from his time at TS.
 215. As in the case of the plaintiff FCI also makes use of a preheating, or first stage induction coil and a second, 'soaking' coil. He found a 100kw induction generator for sale which he purchased and asked Alan Grant of LH Power to quote for a 1.6m induction coil for it, and to build it. They used this coil and generator for the preheat phase. Lutchman designed and manufactured the soaking coil for the

second stage, using drawings which Kurtz provided him of what was envisaged. He asked Lutchman to make the coil pipes for the 2nd coil round like the TS coil pipes.

216. He engaged G K Ceramics to build the inner liner or isolator and provided them with its specifications and the other information they required, including the length of the coil and its diameter. The liners that GK Ceramics produced were not satisfactory. They often broke or cracked whilst being transported from Johannesburg. Kurtz decided that they would cast their own liners and designed a steel plate mould, but when it was manufactured it was not straight enough, so he opted to use a nylon mould (TS also uses a nylon mould) and revised the drawings accordingly. The tapered core of the mould was made of mild steel.
217. The FCI liner is made with a cement-like material which is covered in fibreglass cloth, as is the TS liner. When he was asked where the idea came from he acknowledged that TS uses the same concept. The FCI liner has a 'head stop' which allows the liner to be gripped and to be removed from the induction coil when it must be replaced. It also prevents the chain from piling onto the coil if it gets stuck. The FCI preheat coil also has an extractor pipe at its entrance to extract the smoke produced by the heating of the chain in the induction furnace, similar to that of TS.
218. He was referred to a series of drawings he had made, including drawings of the soaking pipe used by FCI in its second coil, which as in the case of the plaintiff's susceptor/soaking pipe is made from two L-shaped pieces of grade 310 steel welded together. He gave these drawings to Lutchman and requested that he design the induction coil according to the size of the soaking pipe. He pointed out to him that the coil could not be longer 3.45m, as the roof of the building did not allow for it to be longer. As a result the FCI preheat coil is slightly shorter than the TS one.
219. He also designed the quench bath and the sprockets and their side plates, which are used to prevent the chain from falling off it. The sprocket must have the same pitch as the chain, otherwise it would not be able to drive it. Thus, the chain determines the shape of the sprocket.
220. Likewise, the temper oven was also designed by him and was built at 5th defendant's workshop. It also has an articulating valve with two rings which is used to seal the bobbin and is controlled hydraulically by means of a lever. He conceded, with reference to photographs in the trial bundle that TS' temper oven is very similar to the FCI oven. The size of the temper oven is determined by the

size of the bobbin which goes inside it. The bobbin coiler and decoiler are also built around the size of the bobbin.

221. Kurtz identified drawings for the following components that were designed and made by him, which were included in the trial bundle: the defendants' 'hakie', bobbin, the frame and components of the temper oven and its assembly. He said he did not copy these from TS drawings or its components and produced them from his experience and know-how. He admitted that in most instances he had adopted the same design and technical solutions as those of TS, but nonetheless claimed his designs were his 'own'. He agreed that he was 12 years old at the time when TK had started the process of trying to make chain.
222. As clear as Kurtz's evidence appeared to be in chief, the opposite appeared to be the case in cross-examination. At the outset he was reluctant to concede that TS placed considerable value on the protection of its know-how and confidential information pertaining to its manufacturing process for the production of chain. When asked whether FCI placed considerable value on the protection of its know-how and confidential information pertaining to its manufacturing process, he did not provide a straight answer, at first, so too when he was asked whether he considered FCI to be in a competitive position with other manufacturers. He said this was so in respect of the manufacturing of auger and flat wire. When it was pointed out that the question had been phrased in general terms and not with reference to the production of auger and flat wire he struggled to give a coherent answer. He said the question was 'very difficult to answer clearly and correctly'. He said he could not say whether FCI was in a competitive position in relation to the manufacture of chain because he had not been to the plants of 'all other' manufacturers of chain.
223. His style of not answering questions directly, and of frequently providing oblique and obfuscatory responses continued. Thus, when asked whether he had respected the restraint of trade clause in the confidentiality agreement he said he had in relation to the chain business. When asked whether he then conceded he had not done so in relation to the manufacture of auger he claimed that he did not know what the terms of the agreement meant, despite their clear language. When it was put to him that he set up a competing auger business whilst working for TS he would not concede to this. He was pointed to the clause in the confidentiality agreement (paragraph 5) that barred him from becoming involved, directly or indirectly, in any competing business with the plaintiff whilst employed by it. Unable to deflect any longer he said he thought the clause was unreasonable and didn't agree with it, and that it only applied once he started 'trading' and not whilst

he was 'setting up' the auger business. When it was put to him that he had therefore not been truthful and honest in his resignation letter to TK when he had said he was 'totally committed' to TS, as he had set up an auger plant in competition with it whilst still in its employ, he was silent for some time, before eventually conceding that this was the case. Much later in cross-examination he conceded that he had set up his auger manufacturing facility in competition with the plaintiff, utilizing confidential information pertaining to its manufacturing process. From his evidence it was evident that he had no scruples whatsoever in disregarding the restraint of trade clause and his duty not to compete unlawfully with TS, when he set up an auger plant in competition with it.

224. He admitted he had taken drawings of TS parts pertaining to the production of auger, which he had altered or adapted and supplied to 3rd parties including a company in Thailand, as if they were his drawings. He conceded also that in an email exchange he and his partners had said that they needed to change the drawings so that their equipment 'could not be seen as stolen' and in another email in November 2011 he had spoken about 'laundering' drawings and moving 'laundered' equipment. He blamed the use of this word on something he had read in an article and not as an indication of any act of dishonesty. He acknowledged that in one of his emails he had said that if TK 'got his hands' on what they were planning to do via the 'Beijing Pipe Company' and found their 'many similar designs of parts and machines' he would probably sue them. His evidence on whether he tried to use this 'company' as a cover for what he was doing was difficult to follow. Although he denied initially that he had tried to use it as a front later in cross-examination he conceded that he had.
225. He was asked several questions about the discovery which he had made and the affidavit which he had filed opposing a request for further and better discovery, and it was put to him that he had been dishonest in this regard insofar as he had stated that certain drawings did not exist, when in fact they did, as he had supplied them to CT Engineering for the production of auger. Here too he was disingenuous: he said he had not discovered these drawings as he did not have the 'originals', which he had supplied to CT, because when he made revisions to drawings, he deleted their previous iteration. When pressed on why he had then failed to discover the revision drawings he said: 'this thing about copying is quite complicated and there are different legs to it'.
226. He agreed that he had no option but to settle the auger case after auger-related drawings were found on his computer and were produced by 3rd parties under subpoena, and effectively admitted that he had unlawfully breached the plaintiff's

copyright in its auger works and drawings. Once again however, instead of owning up to his actions he attempted instead to justify them, saying that he did not know how copyright 'worked' and had 'made a mistake'. When asked on what basis he had supplied copyright drawings of the plaintiff to 3rd parties, given the contents of the confidentiality agreement, he said that he understood that a '30% adaptation' of another person's drawings was 'okay' because it was not a physical, hard 'copy' of the original work. He claimed also that, as he understood it, whereas TS' drawings were 'confidential' to it i.e. protected, if he made a drawing of its drawings, it was 'ok' i.e. not a breach of its copyright. In similar vein, whilst he admitted that he had 'adapted' TS drawings he claimed he had only done so by altering the frames of the title block templates on them and not the contents of the 'actual' drawings (sic) themselves. He admitted that before he left TS he had 'taken' a set of the plaintiff's auger drawings, although he was not sure if it was a 'complete' set but conceded that what he took was enough to enable him to build and set up a competing auger production line and supply a Chinese company with auger and TS-derived technical drawings pertaining to the manufacture thereof. He admitted that using TS' drawings he had manufactured and sold three auger-making machines.

227. Contrary to what he said in his evidence in chief in relation to his approach to Arsamkar in 2013, he disputed that he had any idea of making chain, until after 2015. He was then referred to a 2010 email to which he, Colenbrander and 5th defendant were parties, pursuant to approaches they had made to Plasson, in which they had spoken of the manufacture of chain as a 'big juicy carrot' (sic). When he was asked to confirm that this was a reference to feed chain (as it could only have been), he said he was not sure that this was so. When it was put to him that the email suggested they were looking for an investor for the manufacture of 'feed chain' he was similarly evasive before eventually conceding that this was the case. He was also pointed to a presentation which was made, before 2015, in which an offer had been made in relation not only to the production of auger and flat wire, but also to feed chain. When it was suggested that from these proposals it was apparent that if the defendants had come into funds pursuant to any of their offers/proposals to 3rd parties they would have proceeded to make chain, he repeatedly did not answer the question, simple as it was.
228. His evidence regarding the so-called schematic 'strip' drawing (at A3-921) which he had supplied to Feltham, and which was modelled on the plaintiff's strip (according to the plaintiff's evidence it was identical to or substantially the same as it), was equally oblique and deflective. When first asked about it he disputed

that it represented a 'strip'. Then he disputed that it was '100%' a strip and said that it was just a schematic of steps which were to be taken to make a link, which was obvious. After much to and fro he eventually conceded that the drawing represented the sequential steps that are taken by the plaintiff in making a link of feed chain in its progression tool.

229. Likewise, his evidence about the schematic 'strip drawing' he supplied to Arsamkar in 2016 was equally unsatisfactory. He was unable to explain why he had sent this drawing (which was also modelled on the progression followed by the plaintiff in its production of chain) to Arsamkar, a customer of the plaintiff. His initial response was that he sent it because Arsamkar had wanted its logo on the drawing of a 'strip' which he sent to it, and FCI had its own drawing. When asked why, then, he had used the plaintiff's strip for the drawing when he could have used FCI's one he said it was because it was 'convenient' to do so. Then he said that the plaintiff's drawings were 3D drawings whilst those of FCI were only 2D. Aside from the nonsensical nature of this response what it shows is that contrary to his denials in this regard he must have had a drawing of the plaintiff's strip progression in his possession. Once again, after much to and fro he eventually addressed the question he was being asked and conceded that he had offered to make chain for Arsamkar that was based on the plaintiff's strip progression, and the drawing replicated the plaintiff's strip progression. He conceded that if he had made a drawing representing VDL's strip progression it would not look like the Arsamkar drawing.
230. He clung fervently to the assertion that the processes which were followed by the plaintiff in the manufacturing of its feed chain were all in the public domain and nothing about them was confidential. He was unable to explain why then, if this was the case, when commissioning Feltham to design a progression tool he had enquired whether he would protect 'confidentiality' therein and not use the designs he came up with for someone else. He had also been worried about FCI's copyright in Feltham's works and drawings because he asked him to put the copyright logo on his drawings. In addition, in his affidavit opposing further discovery he had conceded that the plaintiff's manufacturing process and machinery was confidential to it and had resisted disclosing the names of FCI's customers and the prices it charged them in July 2017, on the grounds that the information that was sought by the plaintiff in this regard was confidential to FCI's business and constituted a trade secret. He had also claimed that the documents were privileged and 'confidential' to the defendants, as they had spent a considerable amount of time and money developing a 'unique' tooling process.

231. When asked on what basis he could then deny that the plaintiff's process was confidential in relation to its chain manufacturing process (by means of its progression tool and its hardening and tempering process), he again became obfuscatory and evasive. He said the plaintiff would have to specifically say which documents it claimed were confidential, because to say that the 'process' was confidential was 'up in the air'. But after further questioning on this aspect he said he 'now understood' and he agreed that the details and application of these processes (including those pertaining to induction heating and tempering) were aspects that were confidential to the plaintiff, albeit not the processes themselves. He agreed that the processes utilised by FCI in the production of feed chain were very similar to those of the plaintiff, at a 'high-level', but claimed they were 'very different' in their detail.
232. He admitted that despite an interdict which was granted by Mangcu-Lockwood J pending finalisation of the issues he had in relation to the 2015 auger order, in terms of which the defendants were interdicted from manufacturing, marketing and selling flat wire and auger, they nonetheless went ahead and did so. His justification for doing so was that their legal team had given them the go-ahead. He denied that by doing so they were in breach of both the 2015 order and the order by Mangcu-Lockwood J. It also transpired that, contrary to his evidence in chief on this aspect TK had not put himself forward as the independent assessing expert but had suggested/appointed NTB to this position and despite this proposal the defendants did not comply with the terms of the 2015 order in this regard.
233. He conceded that when he started with the production of chain, he had been worried that TK/TS would find out what he was up to and had taken steps to ensure that the same fate did not befall his operations as had occurred in 2015, in relation to the production of auger. He conceded that he had attempted to lay down a set of facts and circumstances that would create the impression that what had been done was the result of independent effort by a toolmaker.
234. He agreed that in Feltham's proposed progression the chain links were still laced to the strip, along its sides, and the link was only severed from the strip after it had been formed and not before, as was done by TS and VDL. He agreed that he had informed Feltham that he did not want the order of progression he had proposed and instructed him to follow the progression which was set out in the schematic strip drawing (A3-921) he sent him, which set out the progression which the plaintiff followed in its strip and was modelled on the plaintiff's strip. In his covering email to Feltham he said that the progression which he set out in the drawing was taken from 'other tools' he had seen. He agreed that this could only

be a reference to the plaintiff's progression tool. However, despite these concessions, when it was put to him that what he essentially proposed therefore was that Feltham should replicate the TS strip with a few idlers added, he disputed this and claimed that the strip he asked him to produce for the defendants was 'completely different'. He agreed that the pitch measurement of 44.45mm he provided Feltham could not be obtained from measuring the chain and was not on the A3-921 drawing, and said it was a measurement he remembered from his time at TS, as was the crucial 1.25-degree arc he supplied to Feltham.

235. As to the basis on which he had directed Feltham to the photograph of the plaintiff's linking part on the TD Coating website and had instructed him to copy it, he justified this by saying that as the image was on the Internet one could use it. When it was pointed out to him that the fact that an image appears on a public website does not mean that a person has carte blanche to use it as they want, he responded, disingenuously, that as they never made a copy of the photograph, they did not infringe any copyright which may have vested in the image.
236. He conceded that a series of drawings pertaining to the top and bottom progression tool assembly from which all the steps in the plaintiff's progression (including the cutouts, idlers, knuckle-curling formation and linking) were discernible, as well as a series of drawings of the link-forming die for the bottom part of the tool, were found on his Mecer computer. Likewise, he conceded that drawings of the plaintiff's bobbin and its assembly and the moulds for its inner isolator were also found on the Mecer computer. He admitted that he must therefore have copied these drawings onto his Mecer computer at some stage. He could not say why he had done so. He claimed that he did not know they were there because it was an old computer which he no longer used, and he could not open these files. It was then pointed out that in his affidavit opposing further and better discovery he had said that he had 'opened, perused and considered every file' that was on his computer(s) and from this exercise had prepared a list of files which were set out in a spreadsheet, which according to him were irrelevant to the proceedings. When pressed on this he conceded that he had lied in his affidavit. He admitted that he had transferred a trove of auger drawings from this Mecer computer to his laptop Dell, some years after he had left the plaintiff's employ.
237. Towards the end of his cross-examination he conceded that he had made a concerted effort to ensure that the defendants' designs complied with the TS 'recipe' but sought to justify this on the grounds that 'all' of the TS designs were 'in his knowledge and experience' and he could accordingly use them. When it

was put to him that the designs were confidential to the plaintiff, he disputed his and suggested that the plaintiff had not told him which of its designs were confidential to it, and if it had done so the situation may have been otherwise. This was clearly disingenuous, considering that the plaintiff's designs and drawings were specifically listed as part of its confidential information in the confidentiality agreement which he concluded with it. In similar vein, when it was pointed out to him that the 2nd FCI coil was round, as was that of TS, he claimed that Lutchman was responsible for its design, and not him. However, when he was confronted with his evidence in chief, he recanted, and agreed that he had told Lutchman to make the coil round because TS' coil was round.

238. Ultimately, and by way of summary, during cross-examination 2nd defendant conceded that the processes and information which the plaintiff seeks to protect, were confidential to it. He also conceded that the plaintiff's progression tool, its induction furnace and its temper oven were confidential and not in the public domain. He further conceded that the defendants' progression strip, linking part, induction and temper ovens were substantially similar, if not substantially 'identical' to those of the plaintiff.

The law

A) Ad unlawful competition

239. It is trite that to succeed in a common law claim based on unfair competition, a plaintiff must establish all the requisites for Aquilian liability, including that the defendant has committed a wrongful act. Wrongfulness is determined by the *boni mores* of society, having regard for the requirements of honesty and fairness in trade.
240. In this regard, whilst as a general principle every person is entitled to carry on a trade or business freely in competition with their rivals, the competition must remain within lawful bounds. If it is carried on wrongfully, in the sense that it involves wrongful interference with another's rights as a trader, that will constitute an *injuria* for which the Aquilian action will lie, if it has resulted in a quantifiable loss,² and interdictory relief may be granted.
241. As was pointed out by the plaintiff in its heads of argument, the moral underpinning for the action is based on the injunctions that 'thou shalt not steal' and 'thou shalt not reap that which thou hast not sowed'. Two seminal cases that epitomize such instances are the SA case of *Schultz v Butt*³ and the English case

² *Cochrane Steel Products (Pty) Ltd v M-Systems Group (Pty) Ltd and Ano* 2016 (6) SA 1 (SCA)²; *Schultz v Butt* 1986 (3) SA 667 (A).

³ *Schultz v Butt* 1986 (3) SA 667 (A).

of *Saltman Engineering*.⁴ In *Schultz*, the *locus classicus* in SA in regard to the misappropriation of the product of another person's efforts, the SCA upheld a finding by the court *a quo* that buying a boat and making a copy of the hull thereof (which had been developed with considerable effort, time and expenditure), so that a mould could be made from it which could be used to manufacture boats with 'substantially identical' hulls, was wrongful, and amounted to unfair competition. In *Saltman Engineering* the plaintiffs instructed the defendants to make tools for the manufacture of leather punches, in accordance with drawings which they provided. The defendant used the drawings to make tools, and the tools to make leather punches, for their own account. The Court of Appeal confirmed the decision of the court *a quo* that their actions were unlawful and amounted to a 'breach of confidence'. In effect (as later occurred in *Schultz*) by their actions the defendants were able to dispense with the necessary process of independent design which the plaintiffs had gone through to arrive at their drawings, thereby saving themselves a 'great deal of labour and calculation and careful draughtsmanship' at the plaintiffs' expense.⁵

242. The plaintiff has characterized this matter as one involving the misappropriation and misuse of confidential information and trade secrets belonging to it, which gave rise to two causes of action: unlawful competition and breach of copyright.
243. The misappropriation or misuse of another person's confidential information and trade secrets is a well-established specie of the delict of unlawful competition in our law.⁶ The test for determining whether the necessary 'quality of confidence'⁷ is present is one derived from English law. To qualify as confidential or as a trade secret the information must 1) relate to and be capable of application in trade or industry 2) be secret or confidential and not public knowledge, in the sense that it is known only to a restricted group of people and not to the public at large and 3) be of economic value (in an objective sense) to the plaintiff.⁸
244. The information need not be novel (as is the requirement in patent law), to be protected. What will make it confidential is the fact that the source thereof has 'used his brains' and has thereby 'produced a result which can only be produced by somebody who goes through the same process'.⁹ Thus, the fact that a product has been manufactured from materials which are in the public domain does not

⁴ *Saltman Engineering Co Ltd v Campbell Engineering Co Ltd* (1948) 65 R.P.C. 203.

⁵ *Id* at 215.

⁶ *Pexmart CC and Others v H Mocke Construction (Pty) Ltd and Ano* 2019 (3) SA 117 (SCA) para 63.

⁷ *Saltman* n 4 at 215.

⁸ *Pexmart* n 6 para 64.

⁹ *Saltman* n 4 at 215.

mean that the process by which it was made will not be confidential, for 'something new and confidential may have been brought into being by the application of the skill and ingenuity of the human brain' to it.¹⁰

245. Examples of processes that have been considered protectable as trade secrets (information pertaining to which was consequently held to be confidential), include 1) a plastic pipe-lining process¹¹ 2) an acrylic tile-coating process¹² 3) a process for removing waste produced by mining operations¹³ and 4) a heat treatment process capable of heating a variety of objects, whether bent, moulded or cast, which was developed as a result of experimentation and the expenditure of time and money over 22 years.¹⁴ Although the principle of the ('top hat') furnace which produced the heat was not new, and the 'tape controllers, high velocity burners and ceramic fibres' used by the plaintiff were generally available on the open market, it was the 'summation' of those parts, coupled with the design features such as 'take-off flues, locating devices and chromite sealant', which made it unique.
246. As far as employees are concerned, for the principles to apply there need not be a contractual agreement imposing an obligation of confidentiality on them. Such a term may, in appropriate circumstances, be read as implied in their contract of service. In *Coolair*¹⁵ Marais J pointed out that this may be the case in respect of confidential information they become privy to, such as an employer's trade secrets pertaining to a method of production which is not
247. protected by a patent, which would be potentially damaging if a competitor should obtain it. The potential or actual usefulness of the information to a rival will be an important consideration in determining whether it is confidential or not. It is well-established in our law that it is unlawful for a servant to take their employer's confidential information or trade secrets and use them to compete against them.¹⁶
248. While an ex-employee may apply their 'general' skills and knowledge of a particular trade or industry elsewhere, their former employer is entitled to the maintenance and protection of his trade secrets and confidential information against misappropriation. The SCA has recognized¹⁷ that it may be difficult, in certain circumstances, to draw a 'dividing line' between the use by an employee

¹⁰ *Coco v A N Clark (Engineers) Ltd* [1969] RPC 41 at 47.

¹¹ *Pexmart* n 6.

¹² *Harvey Tiling Co (Pty) Ltd v Rodomac (Pty) Ltd and Ano* 1977 (1) SA 316 (T).

¹³ *Waste Products Utilisation (Pty) Ltd v Wilkes & Ano* 2003 (2) SA 515 (W),

¹⁴ *Harchris Heat Treatment (Pty) Ltd v Iscor* 1983 (1) SA 548 (T).

¹⁵ *Coolair Ventilator Co. (SA) (Pty) Ltd. v Liebenberg and Ano* 1967 (1) SA 686 (W) at p 689, 691B.

¹⁶ *Easyfind International (SA) (Pty) Ltd v Instaplan Holdings* 1983 (3) SA 917 (W) at 927.

¹⁷ *Automotive Tooling Systems (Pty) Ltd v Wilkens and Others* 2007 (2) SA 271 (SCA) para 10.

of his own skill, knowledge and experience, which he cannot be restrained from using, and the use of his employer's trade secrets or confidential information, or other interests, which he may not use or disclose.

249. In some jurisdiction such as the USA and Australia a distinction is made between an employee's 'general knowledge, experience, skill and memory', which may be used, and the 'special knowledge' they obtained at their previous employment 'which a man of ordinary intelligence and honesty would regard as the property of their former employer',¹⁸ which they may not, whilst in English law a distinction is made between an employee's general stock of knowledge and their ex-employer's confidential information and trade secrets.
250. In our law the courts¹⁹ have opted for a flexible approach,²⁰ which involves a value judgment which is to be made as to whether the use of the information by the ex-employee is justified despite its confidential nature. This involves a careful weighing-up of the conflicting interests of the employer and the ex-employee, against the criteria of reasonableness and the *boni mores*, in the light of all the relevant circumstances of the case.

B) Ad copyright

251. Copyright is currently regulated by the Copyright Act of 1978 ('the Act').²¹ It provides²² that certain 'original', defined 'works' will be eligible for copyright protection. Included amongst these are literary, musical and 'artistic' works.²³ To qualify as 'original', within the meaning contemplated in the Act, the works must have been produced by means of 'original skill and labour' i.e. they must not have been copied from another work.²⁴ Originality does not require 'inventiveness' i.e. the works do not have to constitute an invention.
252. Each of the various species of protected works is defined in the Act. 'Artistic' works include (a) paintings, sculptures, 'drawings', engravings and photographs (b) works of architecture²⁵ and (c) 'works of craftsmanship' that do not fall within either of the previous subcategories; irrespective of their artistic quality.²⁶ Drawings are

¹⁸ *Ansell Rubber Co (Pty) Ltd v Allied Rubber Industries (Pty) Ltd* 1972 RPC 811 at 815.

¹⁹ *Motion Transfer & Precision Roll Grinding CC v Carsten & Ano* [1998] 4 All SA 168 (N) at 176.

²⁰ As advocated by Van Heerden & Neethling *Unlawful Competition*, 2nd Ed.

²¹ Act 98 of 1978.

²² Section 2(1).

²³ Sections 2(1)(a)-(c).

²⁴ *Topka t/a Topring Manufacturing & Engineering v Ehrenberg Engineering (Pty) Ltd* 71 JOC (A) at 74. In terms of s 2(3) a work may enjoy copyright protection and may qualify as original even if its making involved the infringement of copyright in some other work, such as in instances where parts of it have been copied from other work, but it also contains original material. A second version or edition of a work will also be entitled to its own copyright provided it differs in substance from the first i.e. is not a mere copy.

²⁵ Being either buildings or models of buildings.

²⁶ Section 1.

defined to include any drawing of a 'technical nature' or any diagram, map, chart or plan. Thus, the technical drawings in issue in this matter qualify as artistic works.

253. As for 'works of craftsmanship', our courts have recognized the following as such: the hull of a boat,²⁷ the mould from which a toilet pan was made,²⁸ the prototype of an exhaust silencer,²⁹ a valve,³⁰ and a wooden model of a kitchen appliance.³¹ In *Bress Designs*³² a 'work of craftsmanship' was described as one which is produced by a craftsman i.e. 'one who practises a handicraft that is a manual skill, a manual art of trade or occupation....all works of craftsmanship require a basic technical skill and know-how in their creation. '
254. Ordinarily, ownership of copyright vests in the 'author' (or, in the case of a work of joint authorship in the 'co-authors') of the work.³³ The 'author' in relation to an artistic work is the person who 'first makes or creates' the work. However, where a work is made in the course of the author's employment by another person under a contract of service, that 'other person' i.e. the employer will be the owner of any copyright which subsists in the work.³⁴ Copyright may be transmitted as 'movable property' by assignment, testamentary disposition or operation of law.³⁵ An assignment shall not have effect unless it is in writing which is signed by or on behalf of the assignor,³⁶ and may be complete or limited, so as to apply to 'some only' (sic) of the acts which the owner of the copyright has the exclusive right to control, or to a part only of the term of the copyright, or to a specified country or other geographical area.³⁷
255. Several presumptions and evidentiary aids apply in establishing authorship and ownership of copyright. Thus, where in the case of an artistic work a name purporting to be that of the author i.e. the maker thereof appeared on the work when it was made (as would commonly be the case in technical drawings), the person whose name so appeared shall in any proceedings which are brought in

²⁷ *Schultz* n 3.

²⁸ *EID Parry (India) Ltd v Vaal Sanitaryware (Pty) Ltd* 728 JOC (T).

²⁹ *Bosal Afrika (Pty) Ltd v Grapnel (Pty) Ltd and Ano* 1985 (4) SA 882 (C).

³⁰ *Insamcor (Pty) Ltd v Maschinenfabriek Sidler Stalder AG t/a Sistag and Ano* 1987 (4) SA 660 (W).

³¹ *Kambrook Distributing v Haz Products and Ors* 243 JOC (W). Prior to the amendment of the Act in 1992 'works of craftsmanship' were qualified and limited to 'artistic' such works and those of a 'technical nature'. Following the decision in *Bress Designs (Pty) Ltd v GY Lounge Suite Manufacturers (Pty) Ltd & Ano* 1991 (2) SA 455 (W), these qualifications were removed, broadening the class of such works.

³² *Id* at 468B.

³³ Section 21(1)(a).

³⁴ Section 21(1)(d).

³⁵ Section 22(1).

³⁶ Section 22(3)

³⁷ Section 22(2).

terms of the Act be presumed, unless the contrary is proved, to be the author of the work.³⁸ Where in any proceedings brought in respect of an artistic work it is proved or admitted that the author of the work is dead, the work shall be presumed to be an original work unless the contrary is proved.³⁹

256. The holder of copyright in an artistic work (and thus also in a work of craftsmanship) has the exclusive right to 'reproduce the work in any manner or form'⁴⁰ and to make an 'adaptation' of the work.⁴¹ Copyright is infringed by any person, not being the owner of the copyright, who, without the licence of such owner, does or causes any other person to do, in the Republic, any act which the owner has the exclusive right to do or to authorize.⁴²
257. Reproduction in relation to an artistic work is defined in the Act as including making a 'version' which is produced by converting the protected work into a three-dimensional form, or if it is in three dimensions, by converting it into a two-dimensional form. Given that technical drawings constitute artistic works, reproducing what is depicted on them into a three-dimensional object, will therefore constitute a breach of copyright.⁴³ Thus, in *Klep Valves*⁴⁴ it was held that making valves which copied those of a competitor, constituted an infringement of the copyright which vested in the competitor's drawings, from which its valves were made.
258. As far as making an adaptation of an artistic work is concerned, this is defined as including a 'transformation' of the work in such a manner that 'the original or substantial features' of it 'remain recognizable'.
259. What constitutes a reproduction, for the purposes of the Act, has been the subject of several cases. It was confirmed in *Jacana Education*⁴⁵ that it does not mean there has to be an 'exact replication':

'Reproduction does not mean exact replication. A man may use another's work as an inspiration to make a new work of his own, treating the same theme in his own manner; but he is not entitled to steal its essential features and substance and retain them with minor and inconsequential alterations. The question is whether there is such a degree of similarity between the salient features of the two works that the one can be said to be a reproduction of the other. In considering whether a substantial part of the plaintiffs' work has been reproduced by the defendant, attention

³⁸ Section 26(1).

³⁹ Section 26(4).

⁴⁰ Section 7(a).

⁴¹ Section 7(e).

⁴² Section 23(1).

⁴³ *Marick Wholesalers (Pty) Ltd v Hallmark Hemdon (Pty) Ltd* 1999 BIP 394 (T) at 409 – 410.

⁴⁴ *Klep Valves (Pty) Ltd v Saunders Valve Co Ltd* 1987 (2) SA 1 (A).

⁴⁵ *Jacana Education (Pty) Ltd v Frandsen Publishers (Pty) Ltd* 1998 (2) SA 965 (SCA) at 972g, citing *Spectravest Inc v Aperknit Ltd* [1988] FSR 161 at 170.

must primarily be directed to the part which is said to have been reproduced, and not to those parts which have not’.

260. In *Creative Technology*⁴⁶ it was held that what must be shown is that there is ‘sufficient objective similarity’ between the alleged infringing work and the original work, or a ‘substantial’ part thereof, for the former to be properly described, not necessarily as being *identical* to, but as a reproduction or copy of the latter; and that the original work was the source from which the alleged infringing work was derived i.e. that there is a causal connection between the original work and the alleged infringing work. Substantiality is a matter of quality, rather than quantity.⁴⁷ The question is whether there is such a degree of similarity between the salient features of the two works that the one can be said to be a reproduction of the other.⁴⁸ Where a ‘sufficient resemblance’ is shown between the two works, the court may draw an inference of access and of copying.⁴⁹ The absence of a reasonable explanation from the defendant may be a compelling indicator of an infringement.⁵⁰
261. In terms of s 26(12)(a)(i)-(ii), in any proceedings relating to the alleged infringement of copyright in a work, evidence to prove the subsistence of the copyright in that work and/or the title of any person in respect of such copyright, whether by way of ownership or licence, may be adduced by way of affidavit, and the mere production of such affidavit in such proceedings shall be *prima facie* proof of the relevant facts contained therein. As is evident from what has been set out above, the plaintiff filed a series of such s 26(12) affidavits in this matter.⁵¹
262. In an action for infringement of copyright a variety of remedies and relief may be granted including damages, an interdict and delivery of infringing copies or ‘plates’ that were made or used (or that are intended to be used) for infringing copies or otherwise. A ‘plate’ is defined as including any ‘stereotype, block, mould, matrix, record, disc or storage medium’ or any ‘version of a work of whatsoever nature’ that is or was used to make infringing copies.⁵² Thus, the Act envisages that an order may be made that the defendant deliver up the machinery and/or device by

⁴⁶ *Creative Technology Ltd v. Aztech Systems PTE Ltd* [1997] FSR 491.

⁴⁷ *Galago Publishers (Pty) Ltd & Ano v Erasmus* 1989 (1) SA 276 (A) at 285; *Biotech Laboratories (Pty) Ltd v Beecham Group Plc & Ano* 2002 (4) SA 249 (SCA) para 9.

⁴⁸ *Jacana* n 45.

⁴⁹ *Creative Technology* n 46.

⁵⁰ *Id. Marick Wholesalers* n 43 at 409 – 410.

⁵¹ Section 26(12)(b) provides that the court before which an affidavit referred to in paragraph (a) is produced, may in its discretion order the person who made it to be subpoenaed to give oral evidence in the proceedings in question, or may cause written interrogatories to be submitted to such person for reply, and any reply purporting to be a reply from such person, shall likewise be admissible in evidence in such proceedings.

⁵² Section 24(1).

which it makes, or has made, infringing copies of the works concerned. In lieu of damages the plaintiff may, at his or her option, be awarded an amount calculated on the basis of a reasonable royalty which would have been payable by a licensee in respect of the work or type of work concerned.⁵³ For the purposes of determining the amount of damages or a reasonable royalty which is to be awarded, the court may direct an enquiry to be held and may prescribe such procedures for conducting such enquiry as it considers necessary.⁵⁴

263. Where an infringement of copyright is proved or admitted, and the court is satisfied (after having regard, in addition to all other material considerations, to the flagrancy of the infringement and any benefit which is shown to have accrued to the defendant by reason thereof), that effective relief would not otherwise be available to the plaintiff, it shall in assessing damages for the infringement have the power to award such additional damages as it may deem fit.⁵⁵

The law applied: an assessment

A) The defendants' case

264. Before arriving at an application of the law to the facts which were established in evidence, it is necessary to refer briefly to the case which the defendants put up in their plea (as amended) and to comment briefly on the witnesses.
265. As far as the defendants' plea is concerned, the following. As to the allegation that they had competed unlawfully with the plaintiff, by misappropriating the plaintiff's confidential information and trade secrets to set up a manufacturing plant which copied that of the plaintiff, the defendants denied that they had conducted themselves in a manner which was unlawful.
266. In amplification of their denial they alleged that feed chain was a 'generic product' and 'details' of the plaintiff's production process for the manufacture thereof (including the layout of its plant and its component parts and particulars pertaining to its setup and operation) were equally 'generic', and at all times relevant to the proceedings, 'information' pertaining to the application of such processes was in the 'public domain'.
267. They admitted that the 2nd defendant was employed by the plaintiff as a plant engineer between 2001 and 2009, and that during that time he was under an obligation to keep the plaintiff's confidential information which he may have been privy to, confidential, but averred that this duty did not continue after he terminated his employment. They claimed that he was at liberty, thereafter, to use his

⁵³ Section 24(1A).

⁵⁴ Section 21(1B).

⁵⁵ Section 24(3)(a)-(c).

knowledge of the plaintiff's confidential information pertaining to its manufacturing processes and the design and operation of various items of plant with which he had become 'intimately acquainted', for his 'own gain', to the extent that 1) such knowledge was inseparable from and part of his 'general stock' of knowledge gained in the exercise of his trade or profession, and 2) it was justified, having regard to the competing interests of the parties and 2nd defendant's constitutional rights in terms of ss 10 and 22 of the Constitution and 'right to benefit' (sic) from the experience he gained in the course of carrying out his trade or profession.

268. The defendants admitted that 2nd defendant disclosed information pertaining to the plaintiff's manufacturing process to the other defendants from 2015 onwards, from which date they manufactured and sold feed chain in competition with the plaintiff, by means of a manufacturing process which was 'similar' to that used by the plaintiff i.e by using items of plant, machinery and tooling which are 'similar' to those used by the plaintiff. The defendants denied however that the information which 2nd defendant disclosed was 'in truth' confidential 'in the sense understood in law' (sic). In the alternative, they averred that if it was confidential 2nd defendant was entitled to act as he did as the information was not separable from his general body of knowledge and expertise gained in the course of his 'studies' and in the exercise of his trade or profession. In the further alternative, they averred that his conduct in appropriating such knowledge and disclosing it was justified, having regard to the competing interests of the parties and 2nd defendant's constitutional rights.
269. As regards the allegation that the defendants breached the plaintiff's copyright and the detailed averments which were made in support thereof, this was simply denied in bald and general terms. The defendants contented themselves with pleading, in the alternative, that if it was found that any of the their machinery or component parts thereof, or drawings, constituted reproductions of any works in respect of which copyright vested in the plaintiff, they were works which comprised articles which primarily had a utilitarian purpose and were made by way of an industrial process, as envisaged in s 15(3A)(c)(ii) of the Copyright act, and three-dimensional reproductions thereof were made available to the public by or with consent of the owner of the copyright, and hence the defendants' reproduction thereof did not constitute an infringement of copyright. Thus, the defendants denied they were liable for any damages either on the basis of a loss of profit or as royalties.
270. As will be evident from the summary of the evidence, during the trial the defendants raised several other defences which had not been expressly pleaded

and which at times were mutually contradictory. Thus, whilst they admitted that many of the components of their production processes were substantially similar, if not identical to that of the plaintiff, at one and the same time they sought to distinguish them on the basis of a myriad of minor, non-functional differences (i.e. differences in regard to their size, measurement, dimensions or appearance), with a view to contending that they were not an exact copy or identical replica of the plaintiff's components. At times these contesting defences were raised in schizophrenic fashion. In other instances, where they were confronted with an evident exactness or a substantial similarity or identity, they contended that this was an inevitable outcome of the end product and the fact that 'form followed function'. Thus, they contended that inasmuch as any chain which was produced by any manufacturer in the world had to match and be compatible with that which was produced by the pioneer manufacturer McCauley in Ohio since 1950, in order to run in a standardized, mechanised poultry feeding system, it was inevitable that the manufacturing process and equipment which was used to produce it would be set up in a largely uniform and substantially similar fashion by competing manufacturers and would be substantially similar in material respects.

B) The witnesses

271. As far as the witnesses are concerned, given the nature and extent of the concessions that were made in evidence by the defendants' witnesses and the extent to which much of the material facts became common cause, it is not necessary to comment in any great detail. The plaintiff's principal witnesses i.e. TK, NTB and AJS gave their evidence in a frank and consistent manner and did not contradict themselves materially during cross-examination. Whilst opportunistic attempts were made to assail TK's credibility on minor aspects, he withstood these, despite being in the witness box for many days. Two aspects of his testimony require mention. In the first place, it was evident that he was extremely angry with the defendants and at times he displayed an openly hostile demeanour towards them. Given that he perceived them as having wrongfully stolen the fruits of years of his labour, effort and expense in developing and refining his manufacturing process, his attitude was understandable. In my view it did not impact materially on his credibility, in any way. Notwithstanding his animus towards the defendants, he did not allow it to influence him to the extent that it caused him to be untruthful or dishonest regarding any material issue. The second aspect that bears mention is that during a tea adjournment, and whilst FDB was under cross-examination, TK apparently passed him a note in which he adjured him to answer negatively to a question that had been posed to him. The

note was brought to my attention by the plaintiff's counsel immediately when proceedings resumed and was accompanied by an acknowledgement that what he had done was inappropriate, for which he apologised. He was clearly repentant and embarrassed, and it was evident that it was no more than a rash and impulsive act which had been occasioned by the anger that he felt towards the defendants and his perception that they were dragging out the proceedings unnecessarily. Nothing more was made of this by the defendants, and it was not suggested at the time, or at any subsequent stage thereafter (including during argument), that this act caused FDB to give evidence that was untruthful in any way, or that it diverted him from the views he expressed in the witness box, in confirmation of those he expressed in his expert report. If anything, the central tenor of FDB's evidence was confirmed by some of the defendant's own witnesses such as Bowles and prof Mostert. It was also not suggested that TK's evidence was to be diminished in any way, by this act. As for the remainder of the plaintiff's witnesses, other than to say they were satisfactory and truthful, there is no cause or need to comment.

272. As for the defendants' witnesses the following. Both Bowles and Feltham came across as attempting to justify the defendant's actions rather than as independent experts who were willing to assist the court in as fair, objective and truthful a manner, as is expected of expert witnesses. Having not seen any other feed chain manufacturing plants, other than those of the plaintiff and the defendant, Bowles' central and abiding assertion that there was always going to be an inevitable, substantial similarity in the process of competing manufacturers making feed chain, was questionable. The weight of the evidence, on both sides, is against him. In this regard Jan Marias testified that when he was asked to produce a progression strip using AutoForm, it differed materially in its progression from that of the plaintiff, and prof Mostert testified that students who were required to do an assignment pertaining to the manufacture of feed chain came up with a manufacturing model which was different to that followed by the plaintiff and the defendant in that it envisaged that the heat treatment, both in respect of hardening and tempering, would be carried out in a single, continuous phase in an oven which could do both induction heating and tempering. And 2nd defendant gave evidence pertaining to the VDL progression which indicated that it also does not follow the progression adopted by the plaintiff, where the link is cut from the strip before it is formed, rather than after. The weight of the evidence thus clearly showed there was no necessary inevitability, in form or function, pertaining to the manufacturing process. In addition, the fundamental difficulty with Bowles'

evidence is that it was predicated on the understanding that to qualify as a copy, a work or component had to be an exact (100%) replica of the original, and to this end he sought to point to a myriad of minor, non-functional differences between the parties' respective components with a view to distinguishing them as being materially different from one another. But as is evident from the exposition of what constitutes a reproduction in copyright law, an infringing work does not have to be an exact copy i.e. an identical replica, and all that is required is that it is substantially identical or similar to the original.

273. As for Feltham, as is evident from the summary of his evidence there were several unsatisfactory features in it, for example, where he sought, unsuccessfully, to distinguish the A3-921 strip progression drawing which the 2nd defendant made and sent him, from both the plaintiff's strip progression and the defendants' one, and contended that they were wholly different from one another, when they clearly and obviously were substantially similar and the differences between them were likewise not material, functional differences. So too, where he sought to assert that the plaintiff's progression strip (on which the A3-921 strip was modelled), had played no real part in his design of the defendants' progression strip. There were also other instances where he seemed to be setting out his evidence in a manner and line that would fit in with the defendant's case.
274. As for the 2nd defendant, as is evident from the exposition of his evidence, he was a most unsatisfactory witness. He was evasive, obfuscatory and disingenuous and at times clearly untruthful. He came across as wholly expedient and cynical.

C) The findings

275. It is time finally, to arrive at an assessment of the evidence in the light of the legal principles which are set out above. In relation to the claim for unlawful competition it is clear from the evidence (if not common cause given the defendants' admissions in this regard), that whilst the manufacturing of feed chain from stainless steel strips using a progression press and heat treatment consisting of induction heating and tempering, based on established engineering principles, are in general terms processes which are in the public domain, the plaintiff's setup and application of these processes is not and is confidential, unique and particular to it. Given the turnover generated by the plaintiff and the position it has achieved in the global market, utilizing these processes, they have obvious and significant economic value to it. The processes which the plaintiff uses to make its feed chain are the result of more than 20 years plus of experimentation and the expenditure of considerable skill, effort and money. There is no suggestion that the 2nd defendant played any material part in this endeavour, and when it commenced he

was still a child. By the time he was taken into the plaintiff's employ it was already producing feed chain utilising the processes it had developed, and these were simply refined during the years that he worked for the plaintiff. There is no indication that he played any material role in the process of refinement and development.

276. Information pertaining to these processes, including the specific 'recipes' and 'solutions' (as the plaintiff called them) that were developed and applied to them, constituted valuable trade secrets in the hands of the plaintiff and gave it a competitive edge and advantage in the market. Having regard for the nature of such information, the economic and competitive value thereof to the plaintiff, the limited (if not negligible) nature of the 2nd defendant's involvement in the development and refinement of the processes concerned, the *boni mores* of society and the dictates of fairness and reasonableness, such information was clearly not information which 2nd defendant as an ex-employee was entitled to impart or disclose to others, nor was he entitled to appropriate it for his own use in competition with the plaintiff.
277. As for the 2nd defendant's purported reliance on the constitutional rights set out in ss 10 and 22 of the Constitution, neither of these sections grant a licence to an ex-employee to steal or misappropriate valuable confidential information and trade secrets of his employer (on which the heart of his enterprise has been built over many years), and a right to use them. In the circumstances, in setting up a competing plant utilising this confidential information to replicate the plaintiff's confidential processes the defendants acted unlawfully. In regard to the cynical claim that the plaintiff's linking part and its induction and temper ovens and bobbins were in the public domain, the following. It is clear from the confidentiality agreements or regime which the plaintiff imposed on those who worked on its parts and processes, that at all times it considered information pertaining thereto to be confidential to it and it did not want such information to become public, for that would open the field to replication by competitors and destroy the competitive advantage which it had carefully built up over many years of painstaking development and refinement. The publication of a photograph of part 2002 by TD Coating on its website clearly occurred without the plaintiff's knowledge, and certainly not with its consent. When it became aware of this it protested and the photograph was immediately removed. There is no indication that the publication of this photograph became public knowledge in the sense that it became known to the industry in which the plaintiff operated, either as a whole, or to any of its members, suppliers or employees, or to any of its competitors other than the 2nd

defendant, who, as has been pointed out had stolen its confidential information and trade secrets and was setting up in unlawful competition with it. In the circumstances to say that the 2nd defendant was allowed to appropriate the image of the plaintiff's linking part and to use it to reproduce the plaintiff's part, would be outrageous, and goes against the cardinal principle of fairness which underpins the legal principles pertaining to what constitutes lawful competition. Regarding the photographs of the plaintiff's temper ovens, which Thermopower placed on its Facebook page, the Oldnalls were at pains to point out that they ensured that they did not show their inside workings and configuration, but only their outside, as they did not want the public to have access and insight into the plaintiff's confidential processes. Insofar as the bobbins are concerned the suggestion that because they sometimes lay outside the plaintiff's factory or could be seen by passersby, and thus they were also in the public domain, is equally cynical. No evidence was tendered to suggest that anyone in the industry, or any other competitor became aware of this, or that this was the basis on which the design and configuration of the plaintiff's bobbin became that of the defendants. As in the case of the other components which the defendants reproduced, they replicated those of the plaintiff because the 2nd defendant knew how they looked and purposefully decided to copy them. After all, as he (and his witnesses) put it so often during the trial, there was 'no need to reinvent the wheel'(sic).

278. As to the claim in copyright, on the strength of the various decisions referred to above the works by means of which the plaintiff developed its progression tool and its linking part/component in particular, its induction heating and tempering process (including its inner isolator and moulds, soaking/susceptor pipe) and furnaces (including induction coils and temper ovens), as well as its bobbins, coilers/decoilers, sprocket assembly and 'hakie', were works of craftsmanship. They were works made by individual craftsmen such as AJS and engineering firms such as Erosion Technology, Schuurman Engineering and TD Coating, using original, specialist technical skill and know-how. These works and the drawings in respect of which plaintiff sought copyright protection were identified and listed in annexures POC 2.1-2.2 to the particulars of claim and in plaintiff's rule 21 response of 6 July 2020. They were also set out in annexures to the draft order which has been proposed, and it is accordingly unnecessary to recite them in detail. They will be included in annexures to the order that will be made.

279. As to originality, the makers of the works of craftsmanship and the authors of the drawings, some of whom were experienced draughtsmen, gave extensive evidence as to the skill, effort, technical know-how and expertise they employed

in producing them. None of the works, including the drawings, were copied from the works or drawings of any other parties or persons and were original.

280. As to the authorship of these works and drawings and the vesting of copyright therein, this was set out in the viva voce evidence and the s 26(12) affidavits, and it is similarly not necessary to recite chapter and verse thereof. In terms of the presumption in s 26(1) the persons whose names appeared as the makers of the drawings in the title blocks on them, are presumed to be their authors and no evidence rebutting this presumption was led by the defendants. The authors of each of the technical drawings (including the adaptations that were made thereto) were identified and listed in the table of works which were supplied as well as in annexure POC 2.1 to the particulars of claim. Several of the authors of the drawings, including Gaffie le Roux, Johann Strauss,⁵⁶ Johan Erasmus and 2nd defendant, were employed by the plaintiff. As such, copyright in the drawings they produced, vested in the plaintiff. Those who were not, including AJS (and his close corporation BTM Engineering CC), NTB (and his close corporation NTB Technical Services CC) and Erosion Technology CC, Schuurman Engineering CC and Thermopower (Pty) Ltd, assigned their copyright in the drawings and/or works they produced, to the plaintiff.
281. As some of the assignments were made after summons was issued the defendants contended that the plaintiff had not shown that it was the owner of copyright in the works that were produced by the assignors, as an assignment of copyright can only operate *ex nunc* and not *ex tunc*. The plaintiff contends that the defendants have misconceived the legal position, and the issue is one that, properly categorized, goes to the plaintiff's standing, and not to the validity of the cessions. It submits that in any event, even if the assignments only operate *ex nunc*, at the time when the court is required to pronounce on the matter the plaintiff is the owner and holder of copyright in the works in question, as they were assigned i.e. ceded to it. It accordingly has the right, title and standing to seek the enforcement of the copyright. It refers to the decisions in 3 matters, in support of its contentions. In *Pleasure Foods*⁵⁷ the court rejected an objection to the applicant's *locus standi* that the assignment of a trademark was ineffective as it was made retroactive, to a date before the applicant came into existence and the application was instituted. In *Pangbourne Properties*⁵⁸ the South Gauteng Court

⁵⁶ As Strauss passed away while in the employ of the plaintiff, the presumption in section 26(4) of the Act applies.

⁵⁷ *Pleasure Foods (Pty) Ltd v TMI Foods CC* 2000 (4) SA 181 (T).

⁵⁸ *Pangbourne Properties Ltd v Your Life (Pty) Ltd* 2013 JDR 2220 (GSJ).

upheld the claim of a plaintiff whose right to claim was only ceded to it after its action had been instituted and in *Aussenkehr Farms*⁵⁹ the SCA upheld the claim of a plaintiff to whom the right to claim payment from the defendant had been (re-)ceded only after the action was instituted.

282. As to infringement, as is apparent from what is set out above, and by way of summary, the central issue that requires determination is whether the defendants have wrongfully ‘reproduced or adapted’ the plaintiff’s protected works of craftsmanship and drawings. In terms of s 7 of the Act direct infringement occurs when a protected work is reproduced ‘in any manner or form’, and in terms of the definitions section a ‘reproduction’ of a work of craftsmanship or a drawing includes making a version by converting the ‘work’ or drawing into a three-dimensional form, or, if it is in three dimensions, by converting it into a two-dimensional form. In terms of the case law, to constitute a reproduction in terms of copyright the test is not whether the infringing work is an ‘exact replication’ i.e. identical, but whether objectively there is ‘such a degree of similarity between the salient features of the two works that the one can be said to be a reproduction of the other’. In determining whether what the defendants have done was impermissible one must determine whether that which was produced by them amounts to a misappropriation of the ‘essential features and substance’ of the plaintiff’s work, with ‘minor and inconsequential’ alterations or additions thereto.
283. In my view, on a careful consideration of the detailed evidence which was given in this regard by all the witnesses (particularly but not only NTB), and an examination of the parties’ respective linking parts and the photographic and video evidence which was submitted as to both this part and the various other components and parts referred to, the plaintiff has succeeded, overwhelmingly, in showing that this is what the defendants did: they copied the essential features of the plaintiff’s parts and components, added certain non-material aspects to them and/o removed or altered others, to produce theirs. In short, they reproduced every material aspect of the works in which the plaintiff enjoyed copyright, and that accounts for the substantial similarity in the parties’ works. Even if it could be suggested that what they did only constituted an adaptation of the plaintiff’s works, it nonetheless constituted an infringement, as the ‘original’ and ‘substantial’ features of the plaintiff’s works ‘remain recognizable’ in the work they produced. The infringements were not only in three-dimensional form, but also two-dimensional, if one has regard *inter alia* for the A3-921 and Arsamkar strip

⁵⁹ *Aussenkehr Farms (Pty) Ltd v Trio Transport CC 2002 (4) SA 483 (SCA).*

progression drawings which were prepared by the 2nd defendant and the drawing of the plaintiff's linking part 2002, which 2nd defendant provided to MTD, to enable it to produce a workable version for the defendants. In this regard, reference must also be made to the detailed comparison which NTB made of the plaintiff's drawing of its linking part 2002 (revision 9), with the defendants' drawing of its linking part 128 (revision 11), which clearly demonstrated the infringement by the defendants of the plaintiff's drawing for part 2002.

284. Lastly, as for the s 15(3A) defence which was raised in the plea, it does not avail the defendants and was not persisted with in argument. The defence is only available in instances where three-dimensional articles have been made available by the copyright owner, to the public, by or with its consent.

D) The relief sought

285. As to the remedies which the plaintiff seeks and to which it is entitled, considering the findings that I have arrived at, the following. The plaintiff is entitled, firstly, to an order allowing it to amend its particulars of claim as per its application of 13 May 2022 (to bring the pleadings in line with the evidence pertaining to the assignment of copyright by AJS and BTM Engineering CC) and the defendants should pay for the costs thereof.
286. As far as the principal relief which is sought is concerned the plaintiff is entitled to be granted interdictory relief⁶⁰ in the terms proposed by it in the draft order, which will restrain the defendants from infringing its copyright and its confidential information and trade secrets *inter alia* by using its current infringing parts/components for the manufacture of feed chain and by making available, disclosing or transmitting the plaintiff's confidential information and trade secrets to 3rd parties. Given that, by their own admission the defendants have not abided by the prior interdictory orders which were granted by this court in relation to the auger matter, to safeguard the plaintiff from any future breach of copyright and its right to the integrity and protection of its confidential information and trade secrets, the terms of the interdictory relief which is to be granted should include an order that the defendants shall not recommence the process of manufacturing, marketing and selling feed chain or feed chain equipment, unless they do so by means of an independently designed and manufactured facility, utilising original

⁶⁰ No case was made out for an interdict that should be of limited duration. Having regard for the length of time which the plaintiff took to develop its processes, which stretched over 20 years plus, and having regard for the fact that any competitor who is desirous of setting up a feed manufacturing facility independently, by means of its own, original effort and design, would probably also take several years to do so there is, in my view, no warrant for making an order of limited duration vide *Purple Surgical International Ltd v Medivators (Pty) Ltd* 2019 JDR 0782 (GP).

skill, labour and thought, after prior notification thereof to the plaintiff, so that it can inspect the plant, equipment and/or components which are to be used therein as well as the drawings for it, which will depict their designs.

287. In the 2nd place, as provided for in terms of the Copyright Act, an order must be made for the delivery up of the infringing parts and components, together with any infringing drawings (in hardcopy or electronic format). In order to ensure that there is no overreach in the process of seizure and to ensure that the execution of the delivery up order does not breach the defendant's rights, the order proposes that a report is to be prepared as to what is seized, which is to be provided to the parties for their consideration, before the destruction of any of the items that have been seized.
288. Thirdly, an order is to be granted declaring that the plaintiff has suffered damages (the nature, quantum and extent of which is to be determined at a separate enquiry), as a result of the misappropriation and misuse of the plaintiff's confidential information and trade secrets and breach of its copyright. To expedite the quantum stage of the proceedings i.e. the enquiry into the award of damages, the plaintiff proposes that an order should be made at this stage, directing the defendants to make discovery of certain listed documents, in accordance with the provisions of rule 35 (2). As previously pointed out the Copyright Act provides that in dealing with an enquiry into damages the court may adopt such procedures as it considers to be fit and appropriate. Whilst in conventional proceedings it would be somewhat unusual to make an order of such a nature at this stage (given that the pleadings in respect of the quantum stage have still to be filed), given the length of time that it has taken the plaintiff to get to this stage of the action and the nature of the documents which are sought, which relate to the earnings/proceeds unlawfully derived by the defendants from the manufacture and sale of feed chain in unlawful competition with the plaintiff and in breach of the plaintiff's copyright and right to confidential information and trade secrets, and with a view to avoiding further unnecessary delay, in my view making such an order would be appropriate and will not cause any harm or prejudice to the defendant. As the plaintiff points out there is precedent for making such an order in intellectual property dispute cases.⁶¹As the plaintiff further points out such an order is necessary in order to assist it in properly quantifying the extent of the

⁶¹ In *Red Diamond Holdings Sarl v Eye of the Storm 2 (Pty) Ltd* [2020] 1 All SA 829 (GJ).208, which concerned trade mark infringement, the court directed the respondent to make discovery (within 60 days of the grant of the order) of a range of documents including *inter alia* an inventory of apparel bearing the relevant trade mark, and a complete and detailed list, accompanied by invoices, of all sales made and orders placed and copies of all invoices issued.

unlawful gain derived by the defendants from their unlawful competition and breach of copyright, at the expense of the plaintiff. This is an aspect which touches fundamentally on the quantum of any damages which are to be awarded, and in my view the defendants would be required to produce such documents in any event, in due course. As is the case in any invocation of the provisions of rule 35, the defendant has the right to contest the production of any of the documents sought, if it can make out a case to show that they are not relevant to the proceedings and the relief which is sought.

289. Finally, as far as costs are concerned the plaintiff seeks an order directing that the defendants should be liable for costs on the scale as between attorney and client. It submits that this is warranted not only because of the defendant's conduct but also because this is a matter where the plaintiff should be granted a full indemnity in respect of the costs it has incurred in vindicating its rights. In motivating for such an order the plaintiff points out that the defendants have a long, sustained and continued history of breaching the plaintiff's rights which extends as far back as 2008-2009 onwards, which conduct they persisted in notwithstanding orders made by this court, including the 2015 auger order and the order made by Mangcu-Lockwood J in 2020, which held that the defendants had contravened the 2015 order as they were manufacturing and selling auger. By their own admission the defendants have disregarded the terms of the interim interdict which was granted by Mangcu-Lockwood J and appear to be acting in contempt thereof. In this regard during his evidence 2nd defendant admitted the defendants had continued with their conduct, notwithstanding the orders referred to.
290. The plaintiff points out that after the auger order was granted in 2015 declaring that they were in unlawful competition with the plaintiff, the defendants nonetheless deliberately and cynically set about establishing a feed chain production plant which replicated the plaintiff's, utilising the plaintiff's confidential information and trade secrets and breaching its copyright. Thus, from 2015-2016 onwards the defendants have been competing unlawfully with the plaintiff in the production of feed chain. Their conduct was brazen and egregious.
291. The plaintiff also pointed out that, from his own evidence and the affidavits he filed in these and ancillary proceedings, it is apparent that 2nd defendant has been mendacious and dishonest (a florid example of this was his averment that he designed the 3rd defendant's factory 'from scratch' and did not copy any of the plaintiff's drawings and indeed did not even use them as a 'design reference', and any similarities between the parties' 'design solutions' was 'purely coincidental')

and showed that he had absolutely no scruples in his dealings, and was prepared to do whatever was necessary and expedient in the pursuit of financial gain, with complete disregard for the plaintiff's rights. In my view there is much force in these submissions and defendants' egregious conduct, particularly that of the 2nd defendant, is such that the plaintiff should be granted a full and complete indemnity for the costs which it has had to incur in having to vindicate its rights. By the time that the matter came to a conclusion it was evident that there was no merit in any of the defences which the defendants had sought to raise and the 2nd defendant had effectively conceded that he had appropriated and misused the plaintiff's confidential information and trade secrets, which it had acquired over two decades of effort and considerable cost. In my view the defendants' conduct also merits a punitive costs order as a mark of the court's displeasure. Both parties made use of senior counsel assisted by two juniors and given the complexity of the technical issues involved and the extraordinary breadth of the issues in dispute, save in respect of the application for leave to amend (which should cover the costs of two counsel) the order should make provision for costs incurred upon the employment of 3 counsel.

292. In 2018 the plaintiff made application for an order (under case no. 21151/18) that the defendants were to desist with the marketing, sale and /or disclosure of the tooling or equipment they were using for the manufacture of feed chain. The basis for the application was that the tooling and equipment was a replica of the plaintiff's and had been acquired as a result of the misappropriation of the plaintiff's confidential information, trade secrets and drawings. The application was necessitated because of information which came to light which indicated that the defendants had approached 3rd parties and/or customers of the plaintiff and had offered to sell or make available to them such tooling or equipment, and indications that the shareholding in the 3rd defendant was possibly going to be disposed of. Although the defendants opposed the application they acceded to an interim order, by agreement, in which the relief which was sought was granted, pending the outcome of this action, and the costs were reserved for determination in this action. The plaintiff contends that in that application, too, the defendants were not honest and had they made a full and honest disclosure of the facts which emerged in this trial, the application would have gone against them on a final basis. In my view, given that they conceded the relief which was sought, which effectively amounted to a concession that the tooling and equipment concerned was a copy, made in unlawful competition and in breach of copyright, as in the

case of the principal matter the defendants should be liable for costs on the attorney-client scale.

The Order

293. In the result, for these reasons I make an Order as per the draft which is annexed hereto, read together with annexures A and B and Form D thereto, which are to be considered as having been expressly set out and incorporated herein.



M SHER

Judge of the High Court

(Digital signature)

Appearances:

Applicant's counsel: Advs R Robinson SC, F Landman & M de Wet

Applicant's attorneys: R Nabal Attorneys (Durbanville)

Respondents' counsel: Advs G Myburgh SC, R Gordon & D Lundstrom

Respondents' attorneys: Faure & Faure (Paarl)

'X' 29.07.24

**IN THE HIGH COURT OF SOUTH AFRICA
(WESTERN CAPE DIVISION, CAPE TOWN)**

Before the Honourable Mr Justice Sher

Cape Town: 29 July 2024

Case No.: 7235/17

TECHNICAL SYSTEMS (PTY) LTD

Plaintiff

and

FEED CHAIN INDUSTRIES

First defendant

CHRISTIAAN ARNOLDUS KURTZ

Second defendant

C QUIPTECH (PTY) LTD

Third defendant

CGC INDUSTRIES (PTY) LTD

Fourth defendant

CARL WILLIAM RICHTER

Fifth defendant

ORDER

Having heard counsel and having considered the evidence, as per the judgment which is delivered simultaneously herewith it is ordered as follows:

A. Amendment of the particulars of claim

1. The plaintiff's application for leave to amend its particulars of claim dated 30 May 2022 is granted.
2. The defendants shall be liable jointly and severally (the one paying the other to be absolved) for the costs of the application for leave to amend, such costs to include the costs of two counsel.

B. Interdictory and related relief

3. The second, third, fourth and fifth defendants ('the defendants') are interdicted and restrained from infringing the plaintiff's copyright in the works (including the drawings) listed on annex **A** to this order, by: -
 - 3.1. reproducing or adapting, in any manner whatsoever, these works or any works substantially similar thereto;
 - 3.2. infringing the plaintiff's copyright in any manner contemplated in section 23(2) of the Copyright Act, 1978;
 - 3.3. causing, aiding or abetting or being party in any manner whatsoever to, any infringement as contemplated in the preceding two sub-paragraphs.
4. The defendants are interdicted from:
 - 4.1. infringing the plaintiff's confidential information or trade secrets in those items listed on annex **B** to this order;
 - 4.2. using, in the form, or substantially in the form, currently used by them as at date of this order, the:
 - 4.2.1. strip layout (die master) for the punching and forming of chain;
 - 4.2.2. bottom progressive tool, including the arrangement of its bottom progressive tool;
 - 4.2.3. linking part, known as part 128, to form and link chain;
 - 4.2.4. induction ovens;
 - 4.2.5. moulds for making the ceramic sleeve/inner isolator of the induction ovens;
 - 4.2.6. temper ovens;

4.2.7.valves used inside the temper ovens;

4.2.8.bobbins, bobbin coilers and bobbin decoilers;

4.2.9.'hakie' i.e hook used to pull, coil and decoil feed chain;

4.2.10. drawings for the equipment and constituent components listed in this paragraph.

4.3. without derogating from any other order made hereby and regardless of the form, format or method:

4.3.1.making available, marketing, selling, exporting or otherwise disposing of the plaintiff's confidential information or trade secrets, or any confidential information or trade secrets substantially similar thereto;

4.3.2.marketing, selling, publishing, disclosing, or making available in any manner; any drawings, designs, specifications, tooling, machinery or equipment of the plaintiff's confidential information or trade secrets, or any confidential information or trade secrets substantially similar thereto;

4.3.3.causing or permitting any aspect or item of the plaintiff's confidential information or trade secrets, or any confidential information or trade secrets substantially similar thereto, to be exported from or to or used outside the borders of the Republic of South Africa;

4.3.4.manufacturing, marketing, offering for sale, soliciting custom for, selling, disposing of, making available or exporting, feed chain produced with the use of the plaintiff's confidential information or trade secrets, or any confidential information or trade secrets, substantially similar to such confidential information or trade secrets;

- 4.4. directly or indirectly, aiding or abetting or causing any party to do any of the prohibited acts contemplated in this order.
5. The sheriff or deputy sheriff, as the case may be, is directed and authorised, immediately upon this order being made, to attach the following items, or components of these items, of the defendants' feed chain manufacturing line, or items or components substantially similar thereto, wherever they may be found, pending finalisation of the delivery up procedure specified below:
 - 5.1. linking and forming tool known as part 128;
 - 5.2. bottom progression tool;
 - 5.3. bobbins, bobbin coilers and bobbin decoilers;
 - 5.4. ceramic sleeve/inner isolator used in the induction ovens;
 - 5.5. moulds to manufacture the ceramic sleeve/inner isolator;
 - 5.6. soaking pipe used in the induction ovens and the ovens;
 - 5.7. 'hakie' i.e hook used to pull, coil and decoil feed chain;
 - 5.8. sprockets;
 - 5.9. temper ovens;
 - 5.10. valves used inside the temper ovens;
 - 5.11. drawings for each of these parts, equipment and components.
6. The defendants are ordered to deliver up for destruction, within 7 court days of this order having been made, and according to the procedure described in the paragraph immediately following this paragraph, to the plaintiff all copies (including all revisions and/or versions of such works) of each of the following works, whether

in two or three - dimensional format and regardless of the medium in which it is stored: -

- 6.1. the linking and forming tool known as part 128;
 - 6.2. bottom progression tool;
 - 6.3. bobbins, bobbin coilers and bobbin decoilers;
 - 6.4. ceramic sleeve/inner isolator as used in the induction oven;
 - 6.5. mould which is used to manufacture the ceramic sleeve/inner isolator;
 - 6.6. soaking pipe as used in the induction oven and induction ovens;
 - 6.7. 'hakie' i.e hook used to pull, coil and decoil feed chain;
 - 6.8. sprockets;
 - 6.9. temper ovens;
 - 6.10. the valves used in the temper ovens;
 - 6.11. drawings for each of these parts, equipment and components.
7. The delivery up procedure ("the delivery up process") shall be conducted as follows:
- 7.1. It shall be attended by the sheriff or deputy sheriff, as the case may be; supervising attorney(s) in the person(s) of either or both of Mr Carel Regardt Nelson of Kemp Nabal Incorporated and/or Mr Chris Brand of Swart Attorneys ("the supervising attorney(s)"); technical expert(s) Mr Forrester de Beer and/or Mr N T Broekhuizen and/or Mr Alf Smidt and/or Mr Hennie van Deventer ("the technical expert(s)"); and photographer(s), being Mr W V Sieberhagen and/or Mrs D T Wielandt ("the photographers") and independent

- IT experts from Cyanre Digital Lab (the “IT experts”). The defendants shall, for the purpose of the delivery up process, permit these persons access to any premises (“the premises”) used by the defendants or to such premises where the items in issue may be found;
- 7.2. The defendants’ attorney is entitled to be present during the delivery up process;
- 7.3. The second defendant or, failing him, a party appointed by the defendants to do so, shall, at such inspection, point out and deliver up to the supervising attorney(s):
- 7.3.1. all three-dimensional components, items and equipment; and
 - 7.3.2. all drawings, regardless of the format in which they are stored;
- to be delivered up as contemplated in this order;
- 7.4. The sheriff or the deputy sheriff, supervising attorney(s) and technical expert(s), in order to ensure that this order has been complied with insofar as it relates to three dimensional objects, as well as drawings in hard copy format, may inspect any part of the premises. In the event of them pointing out items which ought to be delivered up in terms of this order, which have not been pointed out by the defendants, such items shall be attached by the sheriff or deputy sheriff, as the case may be;
- 7.5. The sheriff or deputy sheriff, supervising attorney(s), technical expert(s) and IT expert(s), in order to ensure that this order has been complied with insofar as it relates to electronic media, may inspect any part of the premises and any electronic or digital media (including but not limited to computers, tablets, smart phones, hard drives including servers, removable drives, flash drives, CD drives, DVD drives, smart phones, CDs and DVDs) and any of the

- defendants' accounts on servers, including but not limited to cloud storage assets such as Dropbox and iCloud, as well as communication and social media platforms such as WhatsApp, LinkedIn and Facebook. The defendants shall provide all passwords necessary to enable such inspection. In the event of any of the supervising attorney(s), technical expert(s) and IT expert(s) pointing out items as contemplated in this order which are to be destroyed, the IT expert(s) shall store such item(s) on separate storage devices and thereafter remove it from the defendants' devices or those devices on which the material in issue was found;
- 7.6. Each of the technical expert(s), IT expert(s) and independent attorney(s) shall, within 30 days of the delivery up inspection, compile a report of the delivery up procedure, accompanied by such photographs as each of them may deem suitable and shall deliver copies of such report, as well as copies of the separate storage devices containing the items stored by the IT experts contemplated in the preceding sub-paragraph, to each of the parties, within this time period;
- 7.7. Within 48 hours of the finalisation of the delivery up inspection, the supervising attorney(s) shall issue a certificate of termination of the delivery up inspection;
- 7.8. The plaintiff shall, at its cost, and within seven court days of the date of certificate of termination, transport and deliver for destruction all three-dimensional components, items and equipment delivered up in terms of this order, to SA Metals (Pty) Ltd at 14 Christian Avenue Epping 2, Cape Town, Western Cape, under supervision of the supervising attorney(s) and technical expert(s). The defendants shall do all things necessary to enable the removal and transport of the items to be delivered up.

8. All steps taken as part of the attachment and the delivery up process contemplated in this section B shall take place between the hours of 08h00 and 17h00 on a business day.

C. **Enforcement of the order**

9. The defendants shall not commence the manufacture, marketing, offering for sale, sale or export of (1) feed chain or (2) equipment or components with which to make feed chain; unless and until, they have

- 9.1. designed and manufactured, or caused to be designed and manufactured, independently and without reference to the plaintiff's confidential information, trade secrets or its copyright works; a feed chain producing facility, including all equipment and components comprised by such facility, (the "new line") for the forming of steel into feed chain, the securing, storage and movement of feed chain, as well as the heat treatment of feed chain;

- 9.2. informed the plaintiff in writing, in a communication addressed to the plaintiff's attorneys of record, of any intention to commission the new line (by 'commission' is meant an intention to produce feed chain);

- 9.3. afforded the plaintiff, in writing, in a communication addressed to the plaintiff's attorneys of record, an opportunity of inspecting the new line within ten court days of such notification having come to the notice of the plaintiff;

- 9.4. provided, at least 48 hours prior to the inspection contemplated in the preceding subparagraph, to the plaintiff complete drawings and designs of each machine, item and component relating to the forming of steel; movement, securing and storage of feed chain, and heat treatment of feed chain in the new line.

10. The inspection contemplated in this section of this order shall take place as follows:

10.1. The plaintiff shall be entitled to inspect on any business day(s) during the hours of 08h00 – 17h00 during the ten court day period.

10.2. The defendants shall allow the sheriff and/or deputy sheriff; as well as supervising attorney(s) in the person(s) of Mr Carel Regardt Nelson of Kemp Nabal Incorporated and/or Mr Chris Brand of Swart Attorneys (“the supervising attorney(s)”; technical expert(s) Mr Forrester de Beer and/or Mr N T Broekhuizen and/or Mr Alf Smidt and/or Mr Hennie van Deventer (“the expert(s)”; and photographer(s), Mr W V Sieberhagen and/or Mrs D T Wielandt (“the photographer(s)”), accompanying them, to enter the defendants’ premises, for the purpose of:

10.2.1. examining any item or aspect of the defendants’ new line, including its equipment, machinery, components and parts, such examination including the taking of measurements;

10.2.2. taking detailed photographs of the entirety of the defendants’ new line and each of its equipment, machinery, components and parts.

10.3. The defendants are ordered to permit the said persons to remain on the premises until the inspection has been completed, and, if necessary, to re-enter the premises on the same or subsequent day(s) to complete such inspection.

10.4. The supervising attorney(s) shall compile a report of the inspection, including a bundle of the photographs taken during the inspection, within thirty court days of completion of the inspection, and shall provide a copy thereof to each of the defendants as well as the plaintiff.

10.5. The drawings, designs and photographs of the defendants’ new line, including its constituent parts, provided in terms of this section of this order or taken in

terms of the inspection, shall be deemed to be confidential until such time as a court has determined whether the defendants' own processes and its constituent parts are, in fact, confidential. The plaintiff shall not be entitled to make use of those photographs, save for the purposes of privately examining them and of legal proceedings.

11. The sheriff or deputy sheriff, as the case may be, is directed, before this part of this order concerning the inspection, is executed, to:

- 11.1. hand to the defendants or the other person found in charge of the premises a copy of a notice which accords with Form D (with the necessary amendments as the context requires thereto) attached hereto;

- 11.2. explain the terms thereof with the assistance of the supervising attorney, as may be required.

12. Absent agreement between them, the parties are granted leave to approach the court for further directions relating to the execution of this order.

D. **Damages**

13. The plaintiff is declared to have suffered damages as a result of the misappropriation and unlawful use by the defendants of the plaintiff's confidential processes, trade secrets and information in manufacturing, marketing and selling feed chain, and the breach of its copyright works.

14. An enquiry shall be held to investigate and determine the nature and quantum of the damages suffered by the plaintiff as a result of the infringement of its copyright, confidential information and trade secrets, including the amount of punitive damages (if any) which may be payable by the defendants.

15. The defendants are, in respect of the period 3 June 2015 to date of the discovery, ordered to make the following discovery, not later than 20 days from the date of this order:

15.1. in respect of and concerning the manufacture, offering for sale, marketing, sale, supply, export, or disposal of feed chain or any equipment or component used in the manufacture of feed chain by the defendants:

15.1.1. every invoice; and

15.1.2. purchase order;

15.1.3. all written and digital communications with suppliers, purchasers and interested parties;

15.1.4. every delivery note; and

15.1.5. acknowledgement of delivery;

15.1.6. every quotation;

15.1.7. and in respect of raw material:

15.1.7.1. every invoice;

15.1.7.2. delivery note;

15.1.7.3. acknowledgement of delivery; and

15.1.7.4. quotation, including those merely being requested;

15.1.8. general ledgers of each of the defendants;

15.1.9. all records and documentation concerning the attendance by the defendants or their representatives at trade fairs;

- 15.1.10. customs clearance forms;
 - 15.1.11. requests for customs clearance;
 - 15.1.12. letters of credit, manifests, waybills and all other export documentation;
 - 15.1.13. all written and digital communications between the defendants and export agents;
 - 15.1.14. forward exchange contracts (FECs);
 - 15.1.15. financial statements of each of the defendants;
 - 15.1.16. marketing or advertising material or statements issued by or to the defendants;
- 15.2. regardless of the method of communication and concerning the manufacture, marketing, offering for sale, sale, supply, export or disposition of feed chain or any equipment or components for the manufacture of feed chain:
- 15.2.1. written and digital communications between the defendants inter partes or with third parties in respect of potential investments in the defendants;
 - 15.2.2. financial reports, statements, summaries or any other documentation passing between the defendants inter partes or third parties in respect of potential loans to or investments or partnerships in the defendants;
 - 15.2.3. any disclosures made by any of the defendants in respect of the manufacture or supply of feed chain, or any equipment or

components for the manufacture or supply of feed chain, whether inter partes or to third parties;

15.2.4. all written and digital communications between the defendants inter partes or with third parties, exploring the possibility of manufacturing, selling, exporting or supplying feed chain, or equipment or components to manufacture and produce feed chain;

15.2.5. marketing or advertising material or statements issued by or to the defendants;

15.3. bank statements of each of the defendants pertaining to:

15.3.1. the receipt of proceeds from the manufacture, supply or sale of feed chain or equipment or components used in the manufacture of feed chain;

15.3.2. remuneration or salaries from or to any entity or person manufacturing, supplying or selling feed chain or equipment related to the manufacture of feed chain;

15.3.3. payments for the purchase of raw material or equipment for purposes of or related to the manufacture of feed chain.

16. Should it become evident to the plaintiff, upon receipt of documents from the defendants, that the provisions of this order concerning discovery do not (1) enable the plaintiff to plead adequately or (2) satisfy the requirements of an enquiry into damages, the plaintiff may approach the court for appropriate relief and/or the production of documents necessary or required for the purpose of pleading.

17. Upon the expiry of the period of 20 days referred to above, or 20 days after the finalisation of such further proceedings as may be necessary, as contemplated in

the preceding paragraph of this order, the plaintiff shall have a period of 6 months for the purposes of pleading its damages.

- 17.1. Thereafter the rules of court shall apply in the determination of the process and procedure for the litigation of the plaintiff's claim for damages.
- 17.2. The parties are authorised, on notice to the other parties and should it be required by one or either or both of them, to make application to this court to add to, or vary the above order so as to facilitate the conducting of the determination of the inquiry and award of damages and generally to make application for further directions in regard thereto.

E. Confidentiality of the record of proceedings

18. The provisions of the order of 7 August 2020 under this case number 7235/2017 are confirmed, also in respect of the record and reports filed pursuant to paragraph 7.6 of this order. The Registrar is directed to not provide access to the public of any of the record or documentation contemplated in the 7 August 2020 order, nor the reports filed pursuant to paragraph 7.6 of this order.

F. Costs

19. The defendants shall be liable jointly and severally (the one paying the other to be absolved), to pay the costs of the plaintiff in this matter, on the attorney-client scale, such costs to include the costs of 3 (three) counsel (where so employed); the costs of all inspections of the plaintiff's and the defendants' feed chain manufacturing plants; as well as the costs and qualifying fees of the plaintiff's expert witnesses, including the costs of their attendance at trial, these witnesses being:

- 19.1. Forrester De Beer;

- 19.2. Nicolaas Theodorus Broekhuizen;

- 19.3. Alfred James Smidt;
- 19.4. Hendrik Willem van Deventer;
- 19.5. Jan Marais;
- 19.6. Deon van Staden;
- 19.7. Burger Coetzee;
- 19.8. Jaco de Beer.
20. The defendants shall be liable jointly and severally (the one paying the other to be absolved), to pay the costs of the plaintiff in case number 21151/18, including the costs of two counsel where so employed, on the attorney-client scale.

BY ORDER OF THE COURT

COURT REGISTRAR

Nabal attorneys

Plaintiff's attorneys

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Cnr Strand, Burg & Castle Streets

Cape Town

**IN THE HIGH COURT OF SOUTH AFRICA (WESTERN CAPE
DIVISION, CAPE TOWN)**

Case No.: 7235/17

In the matter between:

TECHNICAL SYSTEMS (PTY) LIMITED

Plaintiff

and

FEED CHAIN INDUSTRIES

First defendant

CHRISTIAAN ARNOLDUS KURTZ

Second defendant

C QUIPTECH (PTY) LIMITED

Third defendant

CGC INDUSTRIES (PTY) LIMITED

Fourth defendant

CARL WILLIAM RICHTER

Fifth defendant

ANNEXURE A: LIST OF PROTECTED WORKS

No.	Component/Part	Drawing no./File name	Page(s)¹
1.	Bottom tool assembly	083-2000-203	1
2.	Bottom tool assembly	\T\O\2000-3	2
3.	Top tool assembly	083-1000-202	3
4.	Top tool assembly	\T\1000-3	4
5.	Linking block insert top tool: Part no. 1032	T\0\1032: Rev 0	10
		\T\O\1032-1: Rev 1 ²	11
		\T\T3\1032-2: Rev 2	12

¹ Machine page numbers on Bundle B to the plaintiff's Rule 21 Answer.

² Rev 1 = original version.

	T\O\1032-5: Rev 5	13
	T\O\1032-6: Rev 6	14
6. Link forming die bottom tool:	083-2002-203:Rev 0	22
Part no. 2002		
	\T\T3\2002-8:	23
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	Rev 4	
	Rev 7	
	Rev 8	
	2002:	24
	Rev 5	
	Rev 9	
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14.	Bobbin pipe detail	TMP001-001-000	39
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16.	Bobbin hub detail	TMP001-003-000	41
17.	Bobbin disc detail	TMP001-004-000	42
18.	Bobbin gusset detail	TMP001-005-000	43
19.	Bobbin handle detail	TMP001-006-000	44
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21.	Bobbin coiler	BC213-0000	46
22.	Feeder frame bobbin decoiler	BC213-0101	47
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29.	Alternate furnace element and flow detail	TECH-SYSTEMS-MC3	54
30.	Alternate furnace external dimensions	TECHSYSTEMS677 – MC4	55
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37.	Technical Systems Fan base	779 – MC3	65
38.	Tech Systems (temper oven) Door	779 – MC4	66-67
39.	Technical Systems Centering Arrangement	779-MC5	68-69
40.	Convection kiln general arrangement	826 – MC – 1	70
41.	Boom structure detail, temper oven	838 – MC – 2	71
42.	Convection furnace	826 – MC – 3	72

43.	Lifting device, temper oven	826 – MC – 5	73
44.	Convection kiln general arrangement	838 – MC – 1	74
45.	Boom structure detail, temper oven	838 – MC – 2	75
46.	Inner back plate, temper oven	838 – MC – 5	76
47.	Inner mechanics of temper oven	838 – MC – 6	77
48.	Element bank, temper oven	838 – MC – 7	78
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53.	Temper ovens 7, 8 and 9 with front view, side view, top view	963 – ASM – 01GA	84
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		214 – 01 – 2: Rev 2	86
		214 – 01 – 2: Rev 3	87
55.	L/h outer mould oven mould	214 – 01 – 01 – 203 ⁴	88
56.	L/h outer mould China Oven mould	214 - 01 - 01 - 203	89
57.	R/h outer mould oven mould	214 – 01 – 02 – 203 ⁵	90
58.	R/h outer mould China Oven mould	CHINA – 214-11-02-203	91
59.	Bottom holder oven mould	214 – 01 – 05 – 203 ⁶	92
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		214 – 01 – 03 – 2: Rev 2	95
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³ Rev 1 is the original.

⁴ Rev 1 is the original.

⁵ Rev 1 is the original.

⁶ Rev 1 is the original.

⁷ Rev 1 is the original.

64.	Top holder 2 oven mould	214 – 01 – 09 – 203	100
65.	Spacer oven mould	214 – 01 – 06 – 203: Rev 1⁸	101-102
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		CYPIPE–ASSY–2: Rev 2	108
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72.	Inner guide lid induction oven	INNER GUIDE LID	112
73.	Sprocket assembly	QT218-0401-01-203	113
74.	Sprocket assembly drive complete	QT218-0401-01-202	114
76.	Sprocket – Isometric assembly		116

⁸ Rev 1 is the original. Page 102 is a copy of page 101.

⁹ Rev 1 is the original.

¹⁰ Rev 1 is the original.

¹¹ Rev 1 is the original.

WORKS OF CRAFTMANSHIP: POC 2.2

1. Bobbin coiler as depicted on pp815 and 906 of trial bundle C3.
2. Bobbin as depicted on p943 of trial bundle C3.
3. Induction oven mould as depicted on p864 of trial bundle C3.
4. Induction oven tapered core as depicted on p873 of trial bundle C3.
5. Induction oven soaking pipe as depicted on EXHIBIT 11: MS POWERPOINT PRESENTATION – INDUCTION OVEN.
6. Oven chain hook as depicted on p888 of trial bundle C3.
7. Induction oven bobbin de-coiler as depicted on p895 of trial bundle C3.
8. Inside tempering oven inlet valve as depicted on p922 of trial bundle C3.
9. Tempering oven as depicted on pp944 and 958 of trial bundle C3.
10. Part 2002 as depicted on pp46 – 61 of trial bundle C1.
11. The sprocket as depicted on pp579 and 583 of trial bundle C2.

**IN THE HIGH COURT OF SOUTH AFRICA
(WESTERN CAPE DIVISION)**

Case No.: 7235/17

In the matter between:

**TECHNICAL SYSTEMS
(PTY) LTD**

Plaintiff

and

FEED CHAIN INDUSTRIES

First defendant

**CHRISTIAAN ARNOLDUS
KURTZ**

Second defendant

C QUIPTECH (PTY) LTD

Third defendant

**CGC INDUSTRIES (PTY)
LTD**

Fourth defendant

CARL WILLIAM RICHTER

Fifth defendant

ANNEXURE B

Items embodying plaintiff's confidential information and trade secrets:

1. Strip layout progression (die master) for the punching and forming of feed chain.
2. Arrangement of steps in and the layout of, plaintiff's bottom progression tool.
3. Tooling to punch and form feed chain, including the part known as part 2002, to form and link feed chain.
4. Induction ovens.
5. Ceramic sleeve/inner isolator used in the induction oven.
6. Soaking pipe used in the induction oven.
7. Sprockets.
8. Moulds for the ceramic sleeve/inner isolator used in the induction oven.
9. Temper ovens
10. Valves used inside the temper ovens.
11. Bobbins, bobbin coilers and bobbin decoilers.
12. 'Hakie' for pulling, coiling and decoiling feed chain.
13. Drawings for each of the above items and their constituent components, such drawings being listed on annex A to the order.

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Fourth defendant

CARL WILLIAM RICHTER

Fifth defendant

FORM D - NOTICE

1. The order being served on you requires you to allow the persons named therein to enter the premises described in the order and to search for, examine, photograph and seize the articles specified in the order. You are also required to hand over the articles specified in the order which are on the premises or under your control, to the sheriff.
2. When these documents are handed to you, you are entitled, if you are an employee of the defendants(s) or in charge of the premises, to contact the defendants immediately and you or the defendants are entitled to contact an attorney and have him come to the premises to advise you. The attorney must be called and must arrive without delay, and the supervising attorney must inform you as to how long the search

can be delayed so as to have the attorney present. Until the attorney, if called, arrives or until the time has passed for him to arrive, you need not comply with any part of this order, except that you must allow the supervising attorney, the sheriff and the other persons named in the order to enter the premises and to take such steps as, in the opinion of the supervising attorney, are reasonably necessary to prevent any prejudice to the further execution of this order.

3. You are further entitled to have the supervising attorney explain to you what this notice and order mean.
4. Take note that, if you disobey this order you may be guilty of the offence of contempt of court, for which you may be brought before court and, if convicted, may be subjected to a sentence of imprisonment and/or a fine, or both, or to such other sanction as the court may deem fit.