Federal Court  Cour fédérale

**Date: 20100603**

**Docket: T-1236-01**

**Citation: 2010 FC 602**

**BETWEEN:**

**WEATHERFORD CANADA LTD.,**
**WEATHERFORD CANADA PARTNERSHIP,**
**EDWARD GRENKE AND GRENCO INDUSTRIES LTD.**

**Plaintiffs**
**(Defendants by Counterclaim)**

**and**

**CORLAC INC., NATIONAL-OILWELL CANADA LTD.**
**AND NATIONAL OILWELL INCORPORATED**

**Defendants**
**(Plaintiffs by Counterclaim)**

**REASONS FOR JUDGMENT**

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**PHELAN J.**

## I. INTRODUCTION

[1] These are the reasons for judgment in an action and counterclaim in respect to Canadian Patent No. 2,095,937 (the '937 Patent) owned by Edward Grenke (Grenke) and licensed to GrenCo Industries Ltd. (GrenCo) which sublicensed the patent rights to Weatherford PC Pump Ltd. and subsequently Weatherford Canada Inc. and Weatherford Canada Partnership.

[2] The '937 Patent claims a seal assembly combination designed to fix a problem of leaking stuffing boxes on rotary progressive cavity pumps (PCPump) that troubled all the heavy oil producers since the early 1980s. An example of a rotary PCPump with the stuffing box is shown below:


[3] There are two parts to a PCPump – a rotor and a stator. The rotor is a steel member that is machined in the form of a single helix. The stator is a steel tube with rubber elastomer bonded to the steel tube and it has a core that is formed in the shape of a double helix. The rotor rotates inside the stator. The single helix rotor and the double helix stator form cavities. As the rotor turns, the cavities progress from bottom to top drawing the liquid to the top – in this case the liquid is oil.

[4] At the top end, surrounding the shaft which turns the rotor, is a stuffing box which is designed to prevent the oil escaping by the shaft. The material inside the stuffing box designed to

prevent oil escaping would wear causing oil leakage, unplanned maintenance and repair – the cause of considerable concern amongst heavy oil producers.

[5] This litigation centred on the claim that the Defendants had been infringing, since at least 1999, the '937 Patent in the manufacture and sale of their drive systems for rotary oil well pumps. The Defendants, aside from denying the allegations and attacking the Patent, also counterclaimed against the Plaintiffs, claiming that they, the Defendants, were the owners by assignment/licence of the '937 Patent and that the Plaintiffs had in fact infringed their patent rights.

[6] The two actions were tried together as one, such that the evidence and submissions in one were also the evidence and submissions in the other.

[7] This matter was subject to a bifurcation order under which damages would be tried separately from the issue of liability.

[8] This litigation involved numerous and complex technical and legal issues; however, at its root was an assessment of credibility in respect of inventorship and a consideration of the behaviour of the key actors in this case. While the Court had the opportunity to observe the principal witnesses, the credibility assessment was made more difficult because of the passage of time and the absence of notes and other documents to assist in setting matters in context.

## II. THE PARTIES

### *Plaintiffs*

[9] Edward Grenke is a machinist by trade living in the Edmonton area, the controlling shareholder of GrenCo and the claimed inventor and owner of the '937 Patent which was filed May 11, 1993 and issued December 22, 1998.

[10] GrenCo is an Alberta corporation with its head office in Edmonton. The company had, from the 1980s to 1991, worked on plunger pump stuffing box applications and metal heat treating and related work. In 1990 it became a distributor of equipment seals for the German company Martin Merkel GmbH (Merkel) in Western Canada, mainly to the oil and gas and pulp and paper industries. It ultimately became the patent licensee of the '937 Patent.

[11] The Plaintiff, Weatherford Canada Ltd. (corporate number 2010240824) (Weatherford Canada) is an Alberta corporation with a head office in Calgary, Alberta. It claimed as a person claiming under the patentee, being the amalgamation successor to Weatherford PC Pump Ltd. who was the sole sub-licensee from GrenCo from February 11, 2000 until February 1, 2001.

[12] The Plaintiff, Weatherford Canada Partnership (Weatherford Partnership), claims as a person claiming under the patentee, the sole sub-licensee of GrenCo from February 1, 2001 to the present.

[13] Weatherford Canada is the successor through multiple amalgamations commencing with Highland Corod Inc., a company at which a key figure in this litigation, Art Britton, worked commencing in October 1995. Weatherford Partnership was formed through the transfer of assets from Weatherford Artificial Lift Systems Canada Ltd. (a successor of Weatherford PC Pump Ltd., the first licensee from GrenCo) and from a predecessor corporation of Weatherford Canada.

[14] The various corporate reorganizations are not challenged here but the state of the licences from GrenCo is. For ease of reference, the term "Weatherford Plaintiffs" refers to either or both of Weatherford Canada and Weatherford Partnership (as the case may be), as well as their predecessors, unless otherwise stipulated or apparent from the context.

*Defendants*

[15] The Defendant Corlac Inc. (Corlac) is an Alberta corporation with a registered head office in Lloydminster. Corlac Inc. (Corlac) was the parent company of Corlac Equipment Ltd. (Corlac Equipment) which manufactured and assembled equipment for oil producers. Prior to the purchase of Corlac Equipment by National-Oilwell Canada Ltd. (NOC), Corlac owned all the shares of Corlac Equipment. Corlac Equipment was responsible for the manufacture and sale of drive heads and stuffing boxes.

[16] NOC is an Alberta corporation, with its registered office in Calgary, Alberta. It purchased the shares of Corlac Equipment from Corlac on November 20, 2003 and on January 1, 2004, NOC

amalgamated with Corlac Equipment. NOC reports its financial information as part of the financial filings of National Oilwell Varco Inc.

[17] The Defendant National Oilwell Incorporated is now known as National Oilwell Varco Inc. (NOI, NOV respectively). NOV is a corporation established under the laws of Delaware with a head office in Houston, Texas and is the ultimate parent of NOC.

## III. THE ACTIONS

[18] Between the time of initiation by the Plaintiffs of this action for infringement and the trial, the pleadings were subject to a number of amendments, reiterations and validations. In the action by the Plaintiffs, they seek a declaration that the '937 Patent, and in particular claims 1, 2, 3 and 6 to 17 inclusive, are valid and have been infringed by the Defendants. They also seek relief in the nature of an injunction, destruction of infringed materials and damages or accounting, including exemplary punitive and aggravated damages along with pre-judgment and post-judgment interest. In essence, the Plaintiffs claim that the Defendants manufactured and sold drive systems for rotary oil well pumps including an assembly for restraining oil leakage, all of which infringes the claims in the '937 Patent as stated above. The Plaintiffs also claim that the Defendants have induced and procured others including their customers to infringe the '937 Patent.

[19] The Plaintiffs also claim that the sealing devices were made and sold through NOC’s predecessor Corlac Equipment and that NOI (now NOV) is a directing mind behind the infringing activities of NOC and is therefore liable for such activities.

[20] The Plaintiffs assert, in addition, that Corlac and Corlac Equipment each infringed the '937 Patent in the same manner and that Corlac was a directing mind behind the infringing activities of Corlac Equipment and Corlac Industries (1998) Ltd. and is therefore liable for those activities. NOI is alleged to have purchased or orchestrated and directed the purchase of Corlac Equipment knowing of the ongoing infringing activities of the Corlac companies.

[21] The Defendants' basic defence is that Grenke was not entitled to the '937 Patent, in that he was not an inventor thereof, and therefore the Weatherford Plaintiffs have no valid rights under the '937 Patent. In respect of infringement, the Defendants claim the usual broad denials of invalidity and infringement and further challenge the claim for damages on, *inter alia*, the remoteness of damage and the absence of profit.

[22] The Defendants further claim that the '937 Patent is invalid because the subject matter of the patent was disclosed more than one year prior to the filing date, because Grenke was not the true inventor and because the patent was void by virtue of untrue material allegations in the patent petition which named Grenke and Walter Torfs as inventor. The Defendants claimed the true inventor to be Art Britton and/or Walter Torfs or, alternatively, a number of other named individuals.

[23] The Defendants further claim invalidity on the basis of untrue material misstatements by Grenke in the 1994 amendments to the petition which had the effect of removing Walter Torfs as an

inventor from the patent petition. The Defendants also claim invalidity on the basis of abandonment by virtue of failure to deal in good faith with the Patent Office, that the asserted claims of the '937 Patent are obscure and ambiguous and the patent is broader in scope than the alleged invention.

[24] The Defendants then counterclaim for a declaration that the '937 Patent is invalid and alternatively, if the patent is valid, NOC claimed for an order pursuant to section 52 of the *Patent Act* that the entry and the records of the Canadian Patent Office relating to the title of '937 Patent be expunged and that the title be varied to name Art Britton as the true inventor and National-Oilwell Canada Ltd. as the owner.

[25] The Defendants, Plaintiffs by Counterclaim, also sought a declaration that the patent, and in particular claims 1, 2, 3 and 6-17, have been infringed by the Plaintiffs Grenke, GrenCo and the Weatherford Plaintiffs. The Defendants also seek the usual orders in the nature of injunction, delivery up, damages and disgorgement of profit.

## IV. THE PATENT

[26] The '937 Patent was designed to address a problem common in the heavy oil industry in North-Eastern Alberta and North-Western Saskatchewan where heavy oil wells which use PCPumps were experiencing failures of their stuffing boxes.

[27] The PCPumps operate the oil well by turning a shaft which was sunk into the ground and which drove a number of sucker rods (long pieces of tubing made up of inter-connected rods) which

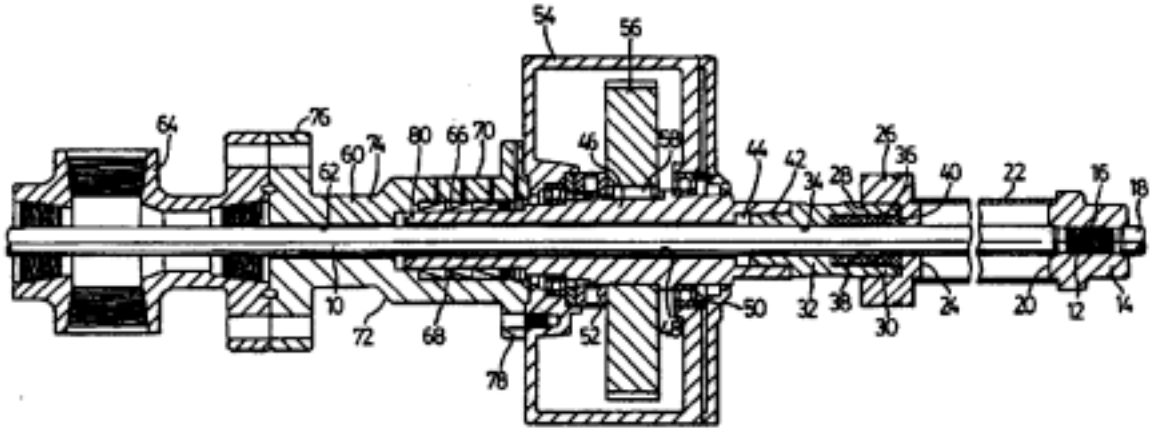
went out to the pockets that contained the oil. The sucker rods turned a stator (device somewhat akin to an auger) which then drew up the oil to the surface. Some of these sucker rods would extend several kilometres underground.

[28] The oil coming from these pockets contained elements of dirt, salt and sand. The existing stuffing boxes – the device which sealed off the top of the oil well from the oil being drawn up – had the rotating shaft running through it. The combination of friction in the stuffing box and the pressure and debris coming up from below ground caused the stuffing boxes to fail. Failure of the stuffing boxes resulted in loss of oil, environmental damage and unplanned shut down of the wells in order to be able to conduct the necessary repairs. All the oil companies in the area experienced the same problem and all were extremely interested in finding a solution to the stuffing box failures or at least a manner by which they could anticipate when the stuffing box repairs would be necessary so that planned maintenance could be undertaken. The '937 Patent was designed to address this problem and to allow for planned maintenance by having the seals in the stuffing box fail in sequence and by permitting inspection of the progress of seal failure.

[29] The '937 Patent is described as:

> An assembly for restraining oil leakage in a rotary oil well pump includes a stationary member and a rotary member. The rotary member is secured to the rotating rod and is sealed against the rod by conventional compressed packing. The rotary member has a cylindrical portion rotating with a cylindrical recess of the stationary member, with an annular recess defined between them. The recess contains two or more annular seal cartridges stacked one after the other in the annular space. The cartridges are designed to individually resist the ingress of the pressurized oil, so that leakage takes place sequentially past the individual cartridges. Leak passages

> are provided in the stationary member and are in communication with each of the cartridges respectively. When oil appears at any given leak passage, this signifies that the oil has bridged the defences of that cartridge and any cartridge or cartridges which are upstream of the leaking cartridge.




[30] The Patent's field of invention is:

> This invention relates generally to the oil production industry, and has to do particularly with improving the efficiency of the seals used to seal a rotary rod of a progressive gravity *[sic]* oil well pump, in order to prevent leakage of oil.

[31] The '937 Patent describes the background of the invention and the problem alluded to earlier.

> Many conventional oil wells are operated by a downhole pump at or close to the bottom of the well, the pump being of a conventional reciprocating kind actuated by a rod string which in turn is reciprocated vertically by a pump jack. Recently, many conventional reciprocating pumps have been replaced by rotary-drive progressive cavity pumps. The rotary pumps are particularly suited for the production of crude oil laden with sand and water.
>
> In the conventional vertically reciprocating pumps, the apparatus is typically constructed in such a way that a single stuffing box

> provides control of leakage and loss of oil. This conventional stuffing box is stationary and is secured to a stationary housing. The part of the upper portion of the rod which actually contacts the stuffing is usually highly polished, thus ensuring minimal leakage and minimal damage to the packing material. With the introduction of rotary pumps, it has been generally found that, if the conventional stuffing box (developed for vertical pumps) is used for the rotary pumps, oil leakage develops relatively early, requiring frequent maintenance and frequent replacement of the packing material.

[32] The '937 Patent contains a broad statement of the invention:

> Broadly stated, the present invention provides an improved assembly for restraining oil leakage from rotary oil well pumps by providing a special sleeve to surround the rod with packing, the sleeve rotating with the rod and therefore not requiring a dynamic seal between them. The sleeve in turn is rotatably mounted within a recess defined by a stationary member, and a plurality of annular seal cartridges are provided to occupy the space between the sleeve and the stationary member. The seal cartridges are constructed in such a way as to resist the leakage of oil on a sequential basis. Thus, oil must first get past an initial seal cartridge before gaining access to the second in line, and the second cartridge must break down before the oil gains access to the third cartridge. Leak passages corresponding to the plurality of seal cartridges indicate by the appearance of oil the furthest downstream cartridge to which the oil has gained access.

[33] For ease of reference, the claims being challenged by the Defendants and being asserted by the Plaintiffs are set forth in Annex A to this judgment.

## V. PLAINTIFFS' EXPERT WITNESSES

[34] The Plaintiffs called two expert witnesses in direct, Cam Matthews (Matthews) and Paul Skoczylas (Skoczylas) and one expert witness in reply, Dr. Richard Salant (Salant).

*Cam Matthews*

[35] Matthews was qualified to give testimony about the impact of failures in and the functionality of stuffing boxes in oil production with the limitation that he was not an expert on seals or stuffing boxes. He also testified as a fact witness concerning the practice in the oil industry relating to the confidentiality of test equipment. Matthews is an employee of C-FER Technologies which is a consulting company for whom both he and Skoczylas work.

*Paul Skoczylas*

[36] Skoczylas was qualified as an expert in mechanical engineering with some knowledge of PCPumps.

*Dr. Richard Salant*

[37] Dr. Salant was accepted by the Court as a mechanical engineering and seal expert generally in the field of sealing rotary shafts but not as an expert in PCPumps or oil tools generally. Dr. Salant has a long career in research and teaching, particularly at the Georgia Institute of Technology. He has written a vast number of papers on the subject of seals and sealing devices and he holds six patents relating to pumping and sealing technologies.

[38] Dr. Salant's evidence which rebutted that of the evidence of the Defendants' experts was clear, cogent and persuasive, both in written form and in his oral testimony. He survived a detailed

and excellent cross-examination and survived it largely unblemished. His evidence was delivered in a manner which was helpful to the Court, non-combative, and to the point.

[39] The Defendants' criticism that he was not an expert in the oil industry is not truly significant, given that he was to address seals and sealing technology which is at the core of this litigation. Except for the fact that he is educated and experienced far beyond the "notional skilled person", he most closely replicated that skill set which he defined and which the parties have generally accepted as the "person skilled in the art" – being a mechanical engineer who has dealt with the design, evaluation or application of sealing methods for a range of services over a period of at least five years. The Defendants would have added a mechanical technologist that had acquired a practical knowledge of the operation of various seal designs and various services over the span of at least 10 years and/or a millwright or machinist mechanically inclined with experience in the field of oil and gas drilling or production, or, alternatively, who have attended courses or seminars dealing with such areas. The essential field of knowledge was seals and sealing methods.

[40] The Court accepts Dr. Salant's evidence and prefers it over that of the evidence of the Defendants, most particularly evidence of Gerard Muller.

## VI. PLAINTIFFS' FACT WITNESSES

[41] The Plaintiffs called as fact witnesses Edward Grenke, Wesley Grenke, John Aboussafy, Roland Moneta and Scott Dudley.

*Edward Grenke*

[42] Edward Grenke's testimony was essentially the cornerstone of the Plaintiffs' case in terms of the development and inventorship of the '937 Patent, the dealings with the customers Amoco and Pan-Canadian Oil, his relationship with Art Britton and his agreements and relationship with Walter Torfs. He also testified in respect of the changes made to filings with the Canadian Patent Office wherein Walter Torfs' name was removed as an inventor, a subject matter on which the Defendants placed considerable reliance as evidence of bad faith and false and misleading dealings with the Patent Office.

[43] Grenke's evidence suffered from the same disability of many witnesses – the passage of time and the absence of corroborative documents. He was also experiencing some medical difficulties. Taking these factors into account nevertheless, he was vague about some details which might not have assisted him and obviously motivated to put the best face on his own activities.

[44] While the Court approaches his evidence with some caution, the core of his narrative was consistent with other evidence and was more believable than that of other witnesses who tended to downgrade Grenke's activities in inventing and creating a useful invention. The Court generally prefers his evidence to that of opposing witnesses, particularly Art Britton. On a balance of probabilities (more likely than not) test, Grenke's evidence is generally accepted unless otherwise indicated.

*Wesley Grenke*

[45] Wesley Grenke is the son of Edward Grenke and works for GrenCo. Wes Grenke's evidence was not particularly pertinent to the case in that he was largely supporting his father's evidence (as one would expect). The testimony was not particularly persuasive or germane and suffered from the fact that he sat through his father's evidence and was well aware of the stakes involved in this litigation and the competing stories being advanced. The Court is therefore giving less weight to his evidence than might otherwise be the case.

*John Aboussafy*

[46] John Aboussafy is the Global Business Unit Vice-President for Fluid Power Systems, a part of the Weatherford Canada Partnership. In 1995 he was a general manager for Highland/Corod and was responsible for hiring Art Britton (Britton) in October 1995 after Britton had ceased employment with GrenCo. He was knowledgeable about the relevant aspects of the business and the relationship between GrenCo and the Weatherford companies and their royalty arrangements. He gave evidence about Britton joining Highland/Corod and his selling of a line of variable frequency device motors (VFD). He spoke also to Britton's dissatisfaction with not being named as an inventor of the Grenke patent.

*Roland Moneta*

[47] Roland Moneta is the Operations Manager with Weatherford Canada Partnership and as of 2006 he was responsible for the licence agreements with Weatherford. His evidence was helpful in

understanding the relationship between GrenCo and the Weatherford companies and the corporate history but he had little personal knowledge of details of the disputes regarding royalties.

*Scott Dudley*

[48] Scott Dudley was a production foreman at Amoco in the early 1990s but was not part of the maintenance group on the Amoco site at Elk Point at which Britton worked. He described the problems with the PCPumps and some of the efforts being made by Amoco to find a resolution for the leaking stuffing box problem. He gave evidence as to the ingenuity of Grenke's concept as well as evidence about public access to oil sites, and about the confidentiality of testing and testing equipment.

## VII. DEFENDANTS' EXPERT WITNESSES

[49] The Defendants called two expert witnesses, Allan Nelson and Gerard Muller.

*Allan Nelson*

[50] Mr. Nelson was accepted as an expert in mechanical engineering with experience in oil field equipment. Nelson's evidence was directed in part towards the prior art and the obviousness which the Defendants claim in respect of the '937 Patent. He also spoke to the absence of infringement of the Corlac device by not having a "dynamic knife edge" in the packing cartridge. His evidence was at times vague and outdated and while he testified as to the search for a solution to the industry

problem, he was unable to articulate a reason or an explanation, that if the solution in the '937 Patent was so obvious, why no one else had discovered it previously.

*Gerard Muller*

[51] Gerard Muller was accepted as an expert in mechanical engineering and sales for rotary pumps generally and rotary pumps for use in oil production and processing in particular. He gave his analysis of the claims and of the validity and infringement issues. He also spoke to the functions and nature of seals and seal cartridges. His evidence was the cornerstone of the Defendants' attack on the Plaintiffs' patent and the Defendants' explanation of non-infringement of the '937 Patent.

[52] Muller's testimony did not stand up under cross-examination and he was shown to be evasive, aggressive, arrogant and unhelpful. Mr. Muller's evidence was significantly undermined by his failure to directly answer questions which admitted of only a direct answer, and by his disrespect and arrogance towards opposing counsel and his longwinded diatribes in giving unresponsive answers.

[53] The Court must conclude that his evidence was of little specific assistance and particularly where it conflicted with that of the Plaintiffs and in particular Dr. Salant, the Court accepts the Plaintiffs' evidence. While no doubt sincere in trying to assist his client, Mr. Muller was apparently unaware of the obligations that an expert owes to the Court and the assistance which an expert is to render in aiding the Court's understanding.

## VIII. DEFENDANTS' FACT WITNESSES

[54] The Defendants called as fact witnesses Brian Derewynka, Art Britton, Barry George, Ken Krucik, Shane Fair, Ronald Johnson, Kurt Uhrich, Roy Manicke, Andreas Reincke, Michael Engelen and Magda Torfs.

### *Art Britton*

[55] Art Britton was the principal antagonist in this contest. He testified as to his involvement in developing the rotating stuffing box and his claim that it was his "idea" which was stolen by Grenke, the confidentiality surrounding the Amoco local unit at Elk Point and his sales activities and other career highlights, both while he was with GrenCo and after leaving GrenCo.

[56] Britton obviously felt that he had been cheated out of credit for his contribution to the '937 Patent. He had a clear and continuing animus against Grenke, best summed up as anything which harmed Grenke was of comfort to Britton. That animus so coloured Britton's evidence that the Court cannot depend on it to any great extent. Britton's evidence also suffered from faulty recollection on key matters including but not limited to the source of his own stuffing box concept.

[57] Britton, who took no steps to assert any alleged patent rights during or after he left GrenCo, assigned his rights much later to what became the Defendants and now contends that it was principally he who invented the stuffing box solution. That is an untenable position given all the credible evidence in this case.

*Barry George*

[58] Barry George was a witness called under subpoena and compensated for his time – a point made by the Plaintiffs but which quite frankly does not undermine the strength of his evidence. It would be unusual in today's circumstances that one could easily secure witnesses without at least compensating for their time and expenses. George's testimony revolved around the Amoco EI (sometimes called CI) (a maintenance group) meetings in the late fall of 1990 and early winter of 1991 regarding the solutions to stuffing box leakage problems. George's testimony suffered from the problem earlier alluded to by the Court of the recollection of events that are well in excess of 10 years past. Therefore, the specifics of what was said or done on any particular date are highly questionable. This does not undermine the integrity or the honesty of the witness' evidence but simply its reliability.

*Ken Krucik*

[59] Ken Krucik was likewise a member of the Amoco maintenance team in the early 1990s and participated in the Amoco EI meetings in the late fall of 1990 and early winter of 1991. His evidence suffered from the same frailties as that of George and all that it established was that in and about those dates there was considerable discussion on the problems of stuffing box leakage which is consistent with other evidence before the Court.

*Shane Fair*

[60] Shane Fair worked at the Elk Point site in 1991 and was responsible for reporting on the first stuffing box delivered to Amoco and the result of its operation.

*Ronald Johnson*

[61] Ronald Johnson was the district foreman at Amoco Elk Point facility in 1990 and was Britton's direct supervisor. His evidence related particularly to the absence of a specific confidentiality agreement with respect to the test equipment. He described a generally corroborative relationship between Amoco and GrenCo. Finally, he confirmed that Amoco's lawyers in Chicago were not interested in asserting any patent rights in respect of the first units delivered to Amoco. He confirmed that for any member of the general public to see the actual mechanics of the PCPump, including the stuffing box equipment, they would have been prevented from doing so by Amoco employees. Importantly, he confirmed that Amoco considered that any testing and development of product such as the stuffing box was confidential within the company.

*Kurt Uhrich*

[62] Kurt Uhrich was the production engineer for the Amoco Elk Point facility in January/February 1991 and reported to Johnson. His evidence was to some extent contrary to that of his supervisor, Johnson, in that he testified that there was no confidentiality surrounding the equipment or the tests of the use of the first devices from GrenCo. As indicated later, the Court

concludes that Johnson's evidence, as a more senior employee of Amoco, more closely reflects the corporate position and the understanding between Amoco and Grenke/GrenCo.

*Andreas Reincke*

[63] Andreas Reincke was an application engineer working at Merkel in Hamburg, Germany in 1991. His testimony related to the visit in April 1991 by Grenke and Britton. While he tended to downplay the inventiveness of Grenke's device, his actual recollection of specifics of the meeting and what one person contributed or knew at the time was vague and unreliable. His chief complaint seemed to be that he was not named as an inventor on the patent.

*Michael Engelen*

[64] Michael Engelen was involved in the design work and development of seals and sealing arrangements at Merkel. He claimed that the design work and ideas for Grenke's invention, in particular a seminal document (Exhibit 10, P145), was his idea and that he contributed a number of other ideas to the eventual patent. He likewise seemed to complain that he was not named on the patent. His evidence was largely directed at claiming a great deal of the inventiveness in the '937 Patent despite the fact that he had no idea whether those ideas would work and his recollection of specifics suffered the same difficulty as that of Uhrich.

*Roy Manicke*

[65] Roy Manicke worked for GrenCo between 1989 and 1995 and his evidence related to the relationship between Britton and Grenke, Britton's role in designing new equipment at GrenCo and the design and manufacture of stand-alone rotating stuffing box units. He also gave testimony with respect to the manner in which items were shipped from GrenCo and the requirement for packing slips and related documents. He also indicated that Grenke had suggested that Britton had an idea and that it would "make them a lot of money". He was unceremoniously let go by Grenke and it was apparent that circumstance coloured his view of Grenke.

*Magda Torfs*

[66] Magda Torfs was the widow and executor of the late Walter Torfs, the former president of Flender Canada. Walter Torfs was to work with Grenke in the development of the solution to oil leakage problems and the creation of the integrated drive unit to operate with the stuffing box. Her evidence, overlaid with the desire to protect her late husband's good name, was directed to his contribution to the integrated drive unit and to the '937 Patent. She confirmed that she had signed away any rights that she or her husband's estate might have in the '937 Patent (if any) and had done so after speaking with her son-in-law who is a lawyer. She had no specific knowledge of what was done or contributed as between Grenke and her husband and her efforts to decipher documents to prove her husband's contribution, while well intentioned, were of little assistance to the Court.

*Brian Derewynka*

[67] Brian Derewynka is an employee of Weatherford Canada and had previously been a maintenance foreman and mechanic with Pan-Canadian from 1990 to 1994. He was called as a witness by the Defendants and declared adverse. He testified as to the purchase of stuffing boxes in 1992 including the handling of the first unit delivered to Pan-Canadian and the possibility that invoicing for product could follow after the product was received.

## IX. THE FACTUAL BACKGROUND

[68] By the late 1980s there was increasing concern about the problem of leaking stuffing boxes on rotary PCPumps which had been experienced by the heavy oil producers since at least the early 1980s. With increasing concern over environmental damage, more frequent use of slap wells, increasing polishing rod speeds (polishing rods are the rods from the top of the well that drive the sucker rods located below ground), mounting loss from production down time, and the exigencies of unplanned oil shutdowns. Every heavy oil producer was interested in finding a solution. The sealing assembly combination claimed in the '937 Patent was designed to fix that very problem.

[69] In late 1990, H & R Valve, a company operating in Alberta, was testing a prototype stuffing box employing a static seal against the polished rod. At that time Britton, then an Amoco maintenance crew foreman, knew of this prototype and had watched it run. He then began discussing the idea of a stuffing box employing a static seal around the polished rod. The idea was that one could avoid the wear and tear of polished rods and packing by not turning the polished rod

inside the packing. Effectively this means that the polished rod and packing would turn together. This H & R Valve prototype and the concept behind it was discussed by Britton and his maintenance crew referred to as EI (or sometimes CI) crew sometime in the first half of 1991 but there was never any concrete description of how this would be accomplished, much less any development of the apparatus itself.

[70] Britton claimed that he had come up with the idea of turning the polished rod with the packing but that evidence was effectively destroyed on cross-examination. He was also vague as to whether he showed any drawing or plan of his concept at the first of these EI meetings. Britton's inconsistencies regarding the origin of his "claimed" concept significantly undermines the credibility of his narrative that he was the inventor.

[71] Sometime in January or February 1991 Grenke who had been selling, to the oil producers, polished rods that were induction hardened to resist wear from packing, met with Britton in the course of a usual sales call. There is conflicting evidence as to whether or not Britton showed Grenke his sketch of the type of apparatus (if such drawing existed) which would solve the problem or whether they simply discussed the problem and possible solutions.

[72] On or about February 23, 1991, Grenke and his son Wes Grenke prepared a drawing of the concept of the sleeve having static seals around the polished rod with a recess in a stationary housing where dynamic seal could be placed on the sleeve. With that concept, Grenke forwarded a

drawing to Merkel, a seal manufacturer, in Germany for advice as to the type of seals made by Merkel that were possible to use with this concept.

[73] At Grenke's request, on March 11, 1991, Britton prepared a first video of the site and wells which were experiencing the stuffing box failures. The video was prepared to inform Merkel of the nature of the problem and the operating conditions. While Britton prepared the video and performed the narrative, he does not suggest in the video any solution to the problem. The video was for Grenke's use with Merkel to find the type of seals which would work best in Grenke's proposed device.

[74] By late March 1991, in response to another drawing sent by Grenke showing the concept and the place for the seals to Merkel, Merkel forwarded a number of suggestions for sealing arrangements which might work.

[75] On April 8, 1991 Grenke and Britton met with Merkel in Hamburg where Merkel employees discussed with Grenke and Britton the various types of seals available and the options that could be used. Despite the varying claims as to who suggested what to whom and when, the end result was that a U-ring arrangement was selected from the various options presented. The weight of the credible evidence is that it was Grenke who decided what type of seal he would use in his device. Seals are only one aspect of the patented device.

[76] Following the meeting with Merkel, Grenke took Britton with him to a trade show at Hanover for the purposes of meeting Walter Torfs, the Canadian representative of Flenders (a manufacturer of drive heads for various pumps), with the view of discussing a way to make and sell a whole well head drive unit incorporating the seal assembly. Since Grenke was unable to find Torfs, he left Britton at the airport and returned to Merkel to work on the project.

[77] At about the same time, Merkel modified Grenke's drawings to show additional apparatus which would permit the conversion from static seals to dynamic seals and vice versa when the seals failed. Grenke added to the drawings and made various amendments including the change to the type of rings and the creation of a leak passage out of the side of the stationary housing. While Merkel employees made certain suggestions and gave technical advice on the seals, Grenke was in charge of the project and made the decision as to what was to be used and what other aspects of design and operation were needed.

[78] Following Grenke's return to Canada in May 1991, he finalized his working drawings using the drawings as amended at Merkel to build a prototype of the sealing arrangement and shipped it to Amoco.

[79] In that same period Grenke met with Torfs and a David Scott of Flenders to discuss the drive components. An attempt to use an off-the-shelf gearbox was unsuccessful. As a result, Flenders agreed to design a gearbox for GrenCo. Grenke had had in his mind the integration of a power unit and stuffing box since as early as his attempted meeting with Torfs in Germany. At

about this time, Grenke and Torfs discussed joint inventorship of ensuing patents and a 50-50 ownership arrangement.

[80] The testing of the prototype unit began on June 21, 1991, with the consent and active participation of Amoco and the test demonstrated to both organizations that Grenke's concept actually could work.

[81] A second prototype stuffing box was installed at Amoco in August 1991. At the time Grenke was working on modifications to the stuffing box to prevent lubricant leakage which had been a problem observed with the first prototype.

[82] In an exception to much of the evidence of meetings, Grenke made notes of a meeting with Merkel on September 20, 1991 confirming that a senior officer on behalf of Merkel indicated that the company had no interest in any patent rights which might arise from the work it was doing with Grenke.

[83] In the fall of 1991 Britton left Amoco. At that time Amoco, after consultation with counsel in Chicago, advised Britton that the company had no interest in patent rights on the developing stuffing box and driveheads. At that time Britton, in his capacity as an employee of Amoco, had been working with Grenke on the improvements to the prototypes.

[84] Britton began working for GrenCo as a salaried sales manager on October 1, 1991.

[85] Throughout the fall of 1991 and into the spring of 1992, Grenke continued to work on the stuffing box design to address leakage problems. There were problems with the use of U-rings in the housing. On a parallel track, design work on a gearbox system was ongoing with Torfs.

[86] The original prototype was eventually redesigned to remove the conversion apparatus, to add additional leak detection passages and to create an integral drive for the sealing assembly. It is these embodiments of the invention which are claimed in the '937 Patent.

[87] On May 11, 1993, Torfs and Grenke, as joint inventors, filed the '937 Patent application in Canada. Torfs, who was responsible for the patent prosecution of this patent and other patents developed in association with Grenke, had retained Thomas Reider to act as the patent agent.

[88] The evidence concerning the respective contribution of Torfs and Grenke to the patent ultimately developed is unclear. The documentary evidence is ambiguous as to who contributed what, Torfs is deceased and Thomas Reider was too ill to testify. Grenke’s claim that he conceived the additional leak passages and integral drive and then discussed these concepts with Torfs is consistent with documentary evidence. The Defendants did not call any witnesses from Flenders to counter Grenke’s evidence.

[89] June 19, 1992 is the date of an invoice from GrenCo to Pan Canadian regarding a packing slip and work order as well as a credit note from GrenCo to Pan Canadian in respect of the invoice.

It is in part this transaction which the Defendants say showed a sale prior to June 19, 1992, based upon a credit note, more than one year prior to the filing date of the patent – May 11, 1993.

[90] By July 6, 1992, Grenke had a drawing of an electric gearbox well head drive and GrenCo sold integral type drive for oilwells. There is no evidence that anyone else sold such units prior to the July 6, 1992 date.

[91] From the summer through to May 11, 1993, there were a series of drawings and design changes to the integrated well head units and improvements to the stuffing box seal arrangements. These included exchanges between Torfs and Grenke and between Grenke and employees of Merkel.

[92] Two days after the Canadian '937 Patent was filed, Grenke signed the documents for the U.S. equivalent patent; Torfs having signed them in February.

[93] Walter Torfs died in June 1993.

[94] On November 3, 1993, Flenders agreed to Grenke taking over the patents filed on its behalf by Torfs and those jointly filed. Flenders agreed to absorb the costs to date but Grenke was to pay future costs as the patents were now his property. Grenke was responsible for the transfer of the patents. The formal assignment covering the '937 Patent was dated March 24, 1994.

[95] By February 14, 1994, Magda Torfs, on her own behalf and as executrix of Torfs' estate, agreed to assign all rights and duties in the "Sealing Assembly for Rotary Oil Pumps and Method of Using Same" application. The date of the actual assignment of the '937 patent application was November 11, 1994.

[96] After the formal assignment from Flenders and after the agreement with Magda Torfs but before the formal assignment, Grenke executed an affidavit to be filed with the Commissioner of Patents who was still prosecuting the '937 Patent. The affidavit was signed on August 17, 1994, and sent by the patent agent to the Commissioner on December 8, 1994 to have Torfs removed as one of the inventors.

[97] The affidavit contained a number of inaccuracies, the most important of which (at least in the view of the Defendants) is:

> … the inclusion of Mr. Torfs as a sole and joint inventor and the failure to identify me as a sole inventor on all the applications were the result of inadvertence or mistake and were not for the purposes of delay.

[98] Under penetrating cross-examination at trial, Grenke admitted that Torfs was an inventor.

[99] By August 1994 relations between Grenke and Britton were strained. Britton was evidently frustrated about his role in the development of the '937 Patent and the lack of recognition of his alleged contribution to the project. Shortly after Grenke made it clear that Britton would not be

named on the '937 Patent, Britton resigned from GrenCo on August 5, 1995 and began to work for himself as a distributor of an unrelated product, a variable frequency drive (VFDs).

[100] A few months later Britton joined Highland/Corod Inc. and brought his VFD business into that company's line of business.

[101] Highland/Corod Inc., through an amalgamation in 1999, became one of the Weatherford Canada Ltd. corporations which ultimately through amalgamations became one of the Plaintiffs. Britton moved on to South America to start up an electronics division.

[102] Sometime in 1999, Glen Schneider, the head engineer of a company called BMW Pump Inc. (which later became Weatherford PC Pump Ltd. and which designed rotating stuffing boxes) joined Corlac Equipment Ltd. Shortly thereafter Corlac Equipment Ltd. began the sale and manufacture of a rotating stuffing box under the name "Enviro" which is alleged to infringe the '937 Patent.

[103] From early 2000 to December 2003 Corlac Equipment sold "Enviro" stuffing boxes in Canada.

[104] In November 2003 NOC purchased the shares of Corlac with the full knowledge of the Plaintiffs' position with respect to the '937 Patent. From January 2004 to the present, NOC has continued to sell the Enviro stuffing boxes in Canada.

[105] Although the Defendants sell different stuffing box designs, all sealing assemblies are similar and are said to infringe.

[106] A startling feature of this litigation is the absence of officers of the Defendants called to address the development of the allegedly infringing stuffing box or to otherwise explain (except through an expert) the non-infringement of the '937 Patent.

[107] GrenCo licensed the Weatherford PCPump effective February 11, 2000.

[108] By a series of amalgamations in September 2003, Weatherford Canada (208951723) became the successor to Weatherford Canada (208127241) which was the amalgamation successor of EVI Tools Canada Ltd., formerly Highland/Corod.

[109] On January 26, 2001, counsel for Weatherford requested a new licence from GrenCo in the name of Weatherford Canada Partnership due to the various amalgamations and reorganizations of the Weatherford companies. Problems occurred between GrenCo and the Weatherford companies and in January 2003 the Weatherford Plaintiffs began making royalty payments in trust pending the resolution of issues related to the requested new licence.

[110] The dispute between the Weatherford Plaintiffs and GrenCo was resolved in August 2004 with a licence effective February 1, 2001, and all royalties which had been paid into trust were then released to GrenCo.

[111] On June 17, 2004, Britton assigned his alleged interests in what is the '937 Patent to Corlac Inc., which was followed up with an assignment from Britton to Corlac Equipment, now known as National-Oilwell Canada Ltd., on March 22, 2005.

[112] In the absence of any proof or any evidence from the Defendants, the evidence is that Corlac was acting in concert with Corlac Equipment in manufacturing and selling their stuffing boxes which the Court finds, as later described, infringes the '937 Patent.

[113] The particular facts in relation to the specific issues raised are addressed further in these reasons.

## X. ISSUES

[114] The parties have agreed to a “Statement of Issues for Trial” comprising 27 issues. Not all of the issues are “live” or continuing once the Court concluded that Grenke is the lawful owner of the '937 Patent and that the Defendants infringed the '937 Patent and the Defendants’ defence is to be dismissed. The Counterclaim and the issues raised fall away in the face of the Plaintiffs’ success on their Statement of Claim. For ease of reference, the Court’s analysis will follow, to a large extent, the Statement of Issues.

[115] The issues are:

**A. Construction of the '937 Patent**

**Issue 1** – What is the proper construction of claims 1-19 of Canadian Patent No. 2,095,937 entitled "Sealing Assembly for Rotary Oil Pumps and Method of Using Same" (the "'937 Patent")?

**B. Infringement by the Defendants**

**Issue 2** – Do the "Enviro" stuffing box products (including the "Griffin" retrofit units) [collectively the "Defendants' Units"] sold by Corlac Equipment Ltd. and National-Oilwell Canada Ltd. infringe any of claims 1, 6, 9, 11, 13-17?

**Issue 3** – Is one or more of the Defendants liable for infringement by the manufacture and/or sale of the Defendants' Units in Canada, or by inducing their customers to use the Defendants' Units in Canada?

**Issue 4** – Did Corlac Inc. exercise such direction and control over Corlac Equipment Ltd. or did Corlac Inc. and Corlac Equipment Ltd. act together, so as to be jointly liable for the alleged infringing activities of Corlac Inc. and Corlac Equipment Ltd. as pleaded in paragraphs 9, 33 or 34(c) of the Amended Statement of Claim (the "Claim")?

**Issue 5** - Did National Oilwell Inc. (now National Oilwell Varco Inc.): (1) exercise such direction and control over National Oilwell Canada Ltd. so as to be jointly liable for the allegedly infringing activities of National-Oilwell Canada Ltd. as pleaded at paragraphs 11 and 33 of the Claim; or (2) induce National Oilwell Canada Ltd. to infringe the '937 Patent as pleaded in paragraph 34(b) of the Claim?

**Issue 6** – Is National Oilwell Inc. liable for inducing the infringement of the '937 Patent by Corlac Inc. and/or Corlac Equipment Ltd. during the period of negotiation for the purchase of Corlac Equipment Ltd. from as early as January 2003 until the ultimate merger of National Oilwell Canada Ltd. and Corlac Equipment Ltd. on January 1, 2004 as pleaded in paragraph 34(d) of the Claim?

**Issue 7** – Is any claim by any Plaintiff statute barred or limited by reason of a limitation period pleaded in paragraph 20 of the Second Amended Statement of Defence and Counterclaim (the "Defence and CC")?

**Issue 8** – Are one or more of the Plaintiffs entitled to maintain an action for infringement of the '937 Patent and/or are the Plaintiffs entitled to equitable remedies?

## C. Inventorship of the '937 Patent

**Issue 9** – Whether one or more of the following individuals are inventors of the subject matter described and claimed in the '937 Patent: Art Britton, Edward Grenke, Walter Torfs, Michael Engelen, and/or Andreas Reincke?

## D. Validity of the '937 Patent

**Issue 10** – Was the subject matter of each claim of the '937 Patent anticipated contrary to section 28.2 of the *Patent Act* by being made available to the public by Grenke more than one year prior to the filing date, or by others prior to the filing date, by reason of the disclosures alleged in paragraphs 22(1) and (2) of the Defence and CC?

**Issue 11** – Was the subject matter of each claim of the '937 Patent obvious contrary to section 28.3 of the *Patent Act* in light of the alleged disclosures pleaded in paragraphs 22(1) and 22(3) of the Defence and CC?

**Issue 12** – Is the '937 Patent void or invalid pursuant to section 53(1) of the *Patent Act* by reason of misrepresentations in the petition or statements made wilfully for the purpose of misleading by Mr. Grenke, personally and/or through his agent, Thomas Reider, as alleged in paragraphs 22(4), 22(5) and 22(7) of the Defence and CC?

**Issue 13** – Is the '937 Patent void pursuant to section 53(1) of the *Patent Act* or invalid by reason of misrepresentations in the petition or statements made by Walter Torfs, personally and/or through his agent, Thomas Reider, as alleged in paragraph 22(6) of the Defence and CC?

**Issue 14** – Is the '937 Patent invalid or deemed abandoned by reason of the allegation that Mr. Grenke did not deal in good faith with the Canadian Patent Office and did not reply in good faith to all requisitions made by the Examiner contrary to section 73(1)*(a)* of the *Patent Act* because of the following particulars, which are also in issue both as to the facts alleged and their legal significance:

(1) Mr. Grenke did not advise the Patent Office of alleged disclosures to Amoco, Pan Canadian and the oil industry at large more than one year before the filing date of the '937 Patent as pleaded at paragraphs 22(8)(i) and (iv) of the Defence and CC.

(2) Mr. Grenke knowingly and wilfully provided an Affidavit dated August 17, 1994 to the Patent Office alleging that Mr. Grenke was the sole inventor and sole owner of the '937, '324 and '473 Patents when he was allegedly not an inventor or the sole inventor of any of the '937, '324 and '473 Patents as pleaded at paragraph 22(8)(ii) of the Defence and CC.

(3) Mr. Grenke responded to all requisitions made by the Examiner as if Mr. Grenke was the sole inventor and/or sole owner of the '937 Patent when Mr. Grenke was not an inventor, the sole inventor, an owner or the sole owner of the '937 Patent as pleaded at paragraph 22(8)(iii) of the Defence and CC.

**Issue 15** – Is the '937 Patent invalid for ambiguity on the basis of the facts pleaded in paragraph 22(9) of the Defence and CC?

## E. Rectification of the Patent Office Record

**Issue 16** – If Mr. Britton is an inventor or co-inventor of the '937 Patent, did National-Oilwell Canada Ltd. acquire Art Britton's interest, if any, in the '937 Patent as referred to at paragraph 28 of the Defence and CC?

**Issue 17** – Does this Court have the jurisdiction pursuant to section 52 of the *Patent Act* to vary the title to the '937 Patent as claimed in paragraph 27(1) or (2) of the Defence and CC?

**Issue 18** – Is the remedy claimed in paragraph 27 of the Defence and Counterclaim pursuant to section 52 of the *Patent Act* to expunge the entry relating to title of the '937 Patent in the records of the Patent Office, or to vary the records to show Art Britton as an inventor or co-inventor and National Oilwell Canada Ltd. as owner or co-owner statute barred by any of the limitation periods pleaded in paragraph 7 of the Amended Reply and Defence to Counterclaim?

## F. Infringement by the Plaintiffs

**Issue 19** – Which of the rotating stuffing boxes sold by the Plaintiffs, if any, infringe claims 1-3 and 6-17 of the '937 Patent?

**Issue 20** – Did Art Britton release Highland/Corod from all claims relating to his alleged involvement in the invention described and claimed in the '937 Patent?

**Issue 21** – Which, if any, of the Weatherford Plaintiffs is/are entitled to claim the benefit of the alleged release provided by Art Britton as referred to in paragraph 6 of the Amended Reply and Defence to Counterclaim?

**Issue 22** – Is/are one or more of the Plaintiffs liable for infringing and/or inducing infringement of claims 1-3 or 6-17 of the '937 Patent?

**Issue 23** – Is National-Oilwell Canada Ltd. entitled to equitable remedies?

**Issue 24** – Is the claim for infringement by National-Oilwell Canada Ltd. barred or limited by a statutory limitation period as pleaded in paragraph 7 of the Amended Reply and Defence to Counterclaim?

## G. Licence Agreements

**Issue 25** – Whether Grenco Industries is validly licenced under the '937 Patent?

**Issue 26** – Are Weatherford Canada Ltd. and Weatherford Canada Partnership persons claiming under the patentee? In particular:

(1) Whether the February 2000 Sub-Licence Agreement is valid?

(2) Whether the Sub-Licence Agreement dated effective February 2001 and executed in August 2004 is valid?

(3) Which of Weatherford Canada Ltd. and Weatherford Canada Partnership is the successor to Weatherford PC Pumps Ltd.'s damages claim as licensee under the alleged February 2000 Sub-Licence Agreement?

> **Issue 27** – If one or more of the Defendants are liable for infringing and/or inducing the infringement of the '937 Patent, are Weatherford Canada Ltd. and/or Weatherford Canada Partnership entitled to claim a remedy during the entire period from 1994 until present?

## XI. A. CONSTRUCTION OF '937 PATENT CLAIMS

[116] The starting point for this patent case is the Claim Construction – the interpretation of the claims made – from which many of the issues, infringement in particular, flow.

[117] The interpretation of a patent is to be conducted purposively, in light of the patent as a whole. The proper approach is now well settled and set out by the Supreme Court in *Whirlpool Corp. v. Camco Inc.*, [2000] 2 S.C.R. 1067 at 1089 and 1093-1095 and in *Free World Trust v. Électro Santé Inc.*, [2000] 2 S.C.R 1024 at 1050:

> The courts have traditionally protected a patentee from the effects of excessive literalism. The patent is not addressed to an ordinary member of the public, but to a worker skilled in the art described by Dr. Fox as
>
> > a hypothetical person possessing the ordinary skill and knowledge of the particular art to which the invention relates, and a mind willing to understand a specification that is addressed to him. This hypothetical person has sometimes been equated with the "reasonable man" used as a standard in negligence cases. He is assumed to be a man who is going to try to achieve success and not one who is looking for difficulties or seeking failure.

[118] The Federal Court of Appeal in *Pfizer Canada Inc. v. Canada (Minister of Health)*, 2007 FCA 209, has summarized the rules or steps in the construction of patents:

**39** The Principles set forth by the Supreme Court in *Whirlpool*, *supra*, and *Free World*, *supra*, can be summarized as follows:

- The task of the Court is to construe the claims of the patent with the aid of expert witnesses (*Whirlpool* at paragraphs 43, 45 and 57).

- Construction of the claims is not to be a result-oriented exercise and must be conducted by the Court prior to its consideration of the issue of infringement (*Whirlpool* at paragraphs 43 and 49(a)).

- The claims are to be construed as of the publication date of the patent (*Whirlpool* at paragraph 42; *Free World* at paragraph 54).

- In construing the claims of the patent, the Court is called upon to determine, on an objective basis, what a skilled reader would have understood the inventor to mean (*Whirlpool*, at paragraph 48; *Free World* at paragraph 44).

- The claim of the patent which is to be construed by the Court must be read in the context of the rest of the specification. I would add to this, however, that reference to the rest of the specification cannot be used to expand the patentee's monopoly as expressed in the claim (*Whirlpool* at paragraphs 48, 49(f) and 52).

- The expert witnesses are there to help the Court understand the invention and its context, as well as the meaning of the terms used in the patent. Needless to say, it is the Court's duty to construe the claims and not that of the experts (*Whirlpool* at paragraphs 45 and 57).

- In construing the claims, the Court is to keep in mind that the patent is addressed to the "ordinary person skilled in the art", i.e. a hypothetical person possessing the ordinary skill and knowledge of the particular art to which the invention relates, and a mind willing to understand a specification that is addressed to him (*Whirlpool* at paragraphs 53, 70, 71 and 74).

- The “disclosure” found in the patent must describe the invention in a sufficiently complete and accurate manner so to allow the person skilled in the art to construct or use the invention when the period of monopoly has expired (*Whirlpool* at paragraph 42). The resulting construction of the claims should be one which is “in the interest of fairness both to the patentee and the public” (*Free World* at paragraph 50). As a result, the construction of the claim may lead to an expansion or limitation of the text of the claim. As Binnie J. said in *Free World* at paragraph 51:

> 51. The involvement in claims construction of the skilled addressee holds out to the patentee the comfort that the claims will be read in light of the knowledge provided to the Court by expert evidence on the technical meaning of the terms and concepts used in the claims. The words chosen by the inventor will be read in the sense the inventor is presumed to have intended and in a way that is sympathetic to accomplishment of the inventor's purpose express or implicit in the text of the claims. However, if the inventor has misspoken or otherwise created an unnecessary or troublesome limitation in the claims, it is a self-inflicted wound. The public is entitled to rely on the words used provided the words used are interpreted fairly and knowledgeably.

[119] In giving meaning to a patent, there are limits on what a Court can and should do. The exercise is the responsibility of the judge aided by expert evidence. Regard to the disclosure portion of the patent’s specification is unnecessary where the terms used in the claim are plain and unambiguous but may be used where there is ambiguity. Further, where the words in the claim are plain and unambiguous, they should not be narrowed or limited to a patent’s preferred embodiment.

[120] The key to purposive construction is the identification by the Court, with the assistance of expert evidence, as to what a “skilled person” would know and understand of the particular words or phrases in the claims that describe what the inventor intended to be the “essential” elements of the invention.

[121] In regard to claim construction, the Defendants were in a difficult position. On the one hand to avoid liability they sought to find ambiguities in the claims which would affect the patent’s validity and the alleged infringement. On the other hand, the Defendants claimed that they, through one of the alleged inventors Art Britton, own the substance of the '937 Patent. Thus the patent must be valid to support their ownership of the claim. It is the problem of riding too many horses in too many directions, all at the same time.

[122] The Plaintiffs are asserting only Claims 1, 6, 9, 11 and 14-17 of the '937 Patent to have been infringed. Of these, construction of aspects of Claims 1, 6, 9, 11 and 14 are in issue.

*Claim 1*

[123] There are two terms used which are the critical areas of dispute:

1. The term “seal cartridges” as contrasted with “cartridge seals”.
2. The term “dynamic seal”, particularly the phrase “knife edge corner”.

[124] The preamble to Claim 1 is “for use with a rotary pump for oil wells in which an elongate rod supports and rotates the rotor of a down-hole pump, an assembly for restraining oil leakage, comprising …”. This refers to a stuffing box for a PC pump drive head.

[125] There are five (5) aspects to Claim 1:

- a stationary first member;
- a rotary second member;
- a plurality of annular seal cartridges;
- for each seal cartridge a leak passage through the first member; and
- a plug means for closing at least one of the passages.

[126] Claim 1 sets out the essence of Grenke’s invention in terms of the system to seal and detect wear in the stuffing box. It is this particular combination of features which was directed at the problem plaguing the heavy oil business at the time.

[127] Claim 1 describes and means an annular space formed between a housing (the stationary first member) and a sleeve (the rotary second member) where seal cartridges are stacked within that annular space and where there are leak passages in the housing for detecting seal failures and where a plug closes at least one passage.

(1) Seal Cartridge

[128] The “seal cartridges” are claimed as follows:

> A plurality of annular seal cartridges stacked within the annular space, each cartridge having in axial section:
>
> (a) a dynamic seal slidably contacting the cylindrical portion;
>
> (b) a first open space downstream of the dynamic seal and adjacent the cylindrical portion and a second open space adjacent the cylindrical wall; and
>
> (c) passageway means through which the two open spaces are in communication.

[129] The dispute is whether the term seal cartridge describes a function or describes an article. The Defendants’ expert Muller described the position best by drawing an analogy to a cartridge pen where the cartridge is a single unit generally disposable. The dispute is whether the description of a seal cartridge means a cartridge or unit being an item in which seals are bound together in an integrated unit - where the emphasis is on the cartridge - or whether it is a series of items making a seal.

[130] Both Muller and Nelson, experts for the Defendants, said that what was meant was a series of individual components bound together in an integrated unit.

[131] However, Nelson admitted that the seal cartridges in the '937 Patent are not bound together in a cartridge. He also admitted that the Corlac unit is similar to the '937 Patent in this regard.

[132] Salant, on behalf of the Plaintiffs, on the other hand, whose evidence is preferred over the Defendants' experts as indicated earlier, attributed the term "seal cartridge" to mean a sub-assembly of elements that perform a certain function – in this case, to provide a seal.

[133] Salant acknowledged that the '937 Patent does not provide a detailed description about how to manufacture a dynamic seal or a seal cartridge. However, in his opinion, the patent described the open spaces, the leak passages and the other elements in a manner that enables a skilled person to understand how it could be made and how it works. He further opined that a skilled person reading the patent in 1994 would readily specify the elements and their function to enable a seal manufacturer to make a seal cartridge.

[134] Skoczylas' evidence was to the same effect that a skilled person would know that a "plurality of annular seal cartridges" meant more than one unit, each having a group of elements to make up the seal to be fitted into the annular space around the cylindrical portion of the sleeve (the rotary second member).

[135] The Defendants correctly describe the resolution of this particular issue as a choice of expert evidence. The Defendants undermine the Plaintiffs' experts by saying that either they were too

young in the case of Skoczylas or not knowledgeable about oil field production equipment as in the case of Salant.

[136] As to knowledge of oil field production equipment, the Defendants agreed to the attributes of the "skilled person" and yet only one of these alternate attributes referred to experience "in the field of oil and gas drilling or production". The two other attributes related to knowledge and experience with seals and sealing – Salant's very expertise. An expert need not be alive or grown up at the time of the event or relevant period in order to express an opinion on the past and therefore the criticism of Skoczylas on these grounds is without merit.

[137] The Court accepts the interpretation of "seal cartridges" as outlined most particularly by Salant. It rejects the interpretation that in effect describes a "cartridge seal" and therefore does not accept the Defendants' interpretation.

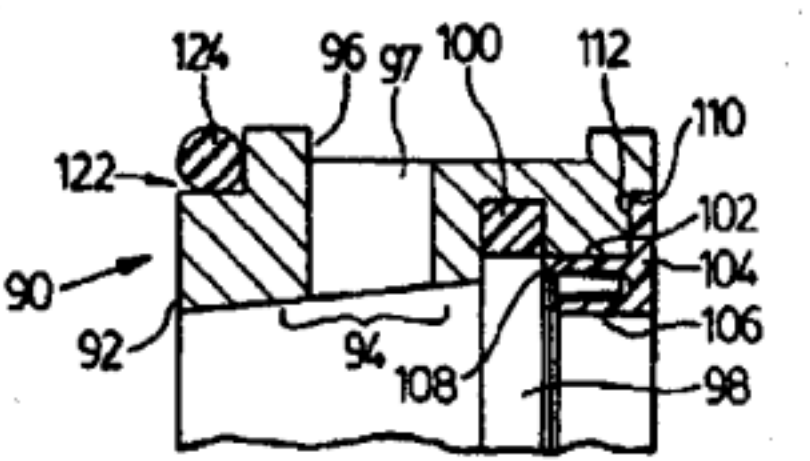
(2) Dynamic Seal

[138] The other phase of claim construction regarding Claim 1 is in element (a) of the cartridge:

> - a plurality of annular seal cartridges stacked within said annular space, each cartridge having, in axial section:
>
> a) a dynamic seal slidably contacting said cylindrical portion, …

[139] The Defendants seek to narrow that description to refer to only one type of seal at one location - a vertical hermetical seal against a rotating shaft, i.e. a knife edge corner at location 92

found on Figure 4 of the '937 Patent (see below). Therefore, they say that any variation from this specific type and place would not fall within the claim. The Plaintiffs say that the description refers to and includes a slip seal and not a mechanical seal like a knife edge mechanical piece which would not be functional as a seal in these conditions.




[140] Therefore, there are two different types of interpretation being urged on the Court. The Defendants seek to narrow the scope of the invention, to limit the monopoly by reference to descriptions outside the specific words of the claim. The Plaintiffs urge a functional interpretation consistent with what they say is the purpose of the invention and the known functions of the constituent parts of the invention. Again, this is a battle of the experts and for the same reasons referred to in paragraphs 38-40, the Court finds Salant's evidence to be more persuasive.

[141] All the experts agree that what is at issue is a seal which operates between a moving surface and a stationary surface. Given a purposive approach to the language of the claim, the issue breaks down to whether a skilled person would understand the phrase to relate to a seal that works in

practice or as alleged by the Defendants, Grenke caused a “self inflicted wound” by using words that teach an unworkable solution.

[142] As Salant testified, a mechanical seal could not properly seal against a cylindrical surface. A skilled person would know that and therefore be directed to a lip seal. Muller acknowledges that a skilled person would reasonably think of a lip seal.

[143] The term “knife edge corner” is taken by the Defendants to refer to an absolute and static type seal. However, Salant says that the phrase is consistent with a dynamic seal – a proposition generally agreed to by Muller, consistent with Nelson’s evidence and supported by a key publication in the field of seals, the 4th edition of the Seals and Sealing Handbook.

[144] The expert evidence confirms that other seals made of different and harder substances would not work. Therefore, the Defendants’ interpretation leads to an unworkable situation which is inconsistent with the purpose of the invention and its components and inconsistent with a Skilled Person’s understanding – a mind willing to understand.

[145] The Plaintiffs’ interpretation is more reasonable and consistent with the basic principles of claim construction. The reference to the disclosure in the patent (a reference which is not strictly necessary) is also consistent with the conclusion that “dynamic seal” includes lip seals.

[146] Lastly, but not necessarily determinatively, the seals must be able to account for wobble and vibration. The Defendants' thesis would ignore the physical properties of a moving shaft operating in the conditions in which it was to be used.

[147] Therefore, the Court accepts the Plaintiffs' interpretation. The reference in Figure 4 does not limit the invention as alleged by the Defendants.

*Claims 2-5*

[148] The important and disputed issues in these claims are resolved by the interpretation of Claim 1.

*Claim 6*

[149] The phrase initially at issue is "… annular space … closed by an annular wall at its upstream end …". The dispute is over the word "closed".

[150] The dispute is essentially over how closed must the annular space be. The Defendants raised the issue in their experts' reports but have not pushed the matter in either their written or oral arguments.

[151] The Defendants take the position that the annular space in the '937 Patent must be closed because they claim that the Corlac device does not have a closed annular space.

[152] The Plaintiffs' expert Skoczylas says that the annular wall provides a seat upon which to stack the seal cartridges during assembly. That view was confirmed by Nelson. Having determined the meaning of seal cartridges, the purpose – to provide a seat – is met so long as the seal cartridges are supported.

[153] The gap between the edge of the annular wall and the spindle is not material and is not functionally relevant. The Defendants' strict construction serves no purpose other than to try to avoid infringement.

[154] The Court accepts the Plaintiffs' interpretation as being consistent with a purposive interpretation of the patent.

[155] The issues relating to Claims 7 and 8 are subsumed in the interpretation of Claims 3, 6 and 1.

*Claims 9-12*

[156] The claims describe a threadable connection between the rotary second member and the packing portion that defines an annular cavity which includes a packing portion surrounding the rod.

[157] The dispute relates to the meaning of "packing elements compressed within said annular cavity". These elements make a static seal between the rotating sleeve and the rod.

[158] The Defendants interpret the claims to be restricted to conventional static packing that is compressed to seal through axial compression by mechanical means – this is what is meant by the "third element" in Muller's report.

[159] The evidence is that the term "packing elements compressed within said annular cavity" would refer to compression seals generally and that a Skilled Person would not limit their understanding to packing that is being compressed using a third element.

[160] In responding to Muller's thesis, Salant outlined the manner in which compression seals operate to create the packing element compressed within the annular space.

> 43. The term compression seal refers to seals where a sealing material (such as rope packing) is arranged between two co-axial supporting surfaces and the sealing function is accomplished (i.e. the seal is activated) when the sealing material exerts a radial pressure on the support surfaces. One could say the seals are squeezed into a confined space in order to work. It is the force opposing compression that exerts the radial pressure and so such seals are referred to as "compression seals".
>
> 44. One method of creating the necessary radial seal pressure is to apply an axial compression force continuously to the sealing material using a mechanical means or "third element" as described by Mr. Muller. This was typical of traditional rope packing. However, a resilient sealing material may be compressed radially when it is inserted into a packing gland and remain compressed and exert a radial sealing pressure during service without the need for continuous axial compression. Examples of this type of compression seal are the Polypak® brand squeeze seals marketed by Parker Hannifin Corp. and the machinery seal shown in US

> 4,193,606 attached as Exhibit B-4 to Mr. Muller's affidavit. I would refer to these seals as "packing elements".
>
> 45. Claims 9 and 11 provide for "a plurality of packing elements compressed within said annular cavity." A skilled person would understand that this refers to a compression seal in which compression of the seal material or "packing" exerts a radial pressure to make a seal between two co-axial support surfaces. Such person would know in 1994 that there were resilient packing materials available which would not require a continuous axial load to maintain the radial pressure.

[161] Packing is accepted as meaning the media that is placed in a closed space between a static member and a rotating member under compression to prevent the passage of a fluid or a gas. The packing, whatever its composition, is squeezed in a manner to prevent leakage.

[162] The Defendants' Nelson admits that the above definition of packing would include a U cup seal and U rings as they are commonly referred to as packing. Muller then admitted that the U cup seals in the Corlac device are commonly referred to as packing. Nelson also accepted that a seal held in place by an interference fit would have a radial expansion of the seal sufficient to create a good seal. The use of a screw or some device to tighten down on the seal axially to cause radial expansion was unnecessary.

[163] Salant described the purpose of packing elements is to make a static seal between the walls of the cavity – between the rotating hollow shaft and the rotating polish rod.

[164] Therefore, the Court accepts that “packing elements compressed within said annular cavity” includes compression seals generally and U cup and U rings are included in that meaning. The Court further accepts that a Skilled Person would not interpret the claims to require that the packing must be compressed (axially) by a third element.

*Claims 13-17*

[165] There are no issues of claim construction not already dealt with in the earlier discussions.

## XII. B. INFRINGEMENT BY THE DEFENDANTS

[166] The issues to be addressed under this section are Issues 2-8 (except Issues 4-6).

[167] Issues 4-6 dealing with the liability of specific Defendants are subsumed in Issue 3.

*Infringement Analysis*

[168] The law on infringement is not in issue. Section 42 of the *Patent Act* gives a holder of a patent the right to exclude others, for the term of the patent, from making, constructing or using the claimed invention or selling it to others to be used.

[169] There is infringement if a person takes the substance of the invention and it does not matter if the person omits a non-essential feature or substitutes an equivalent for it (*Mobil Oil Corp. v. Hercules Canada Inc.* (1996), 63 C.P.R. (3d) 473 (C.A.) at para. 39).

[170] The burden of proving infringement rests on the Plaintiffs based on the balance of probabilities. (*Lubrizol Corp. v. Imperial Oil Ltd. (F.C.A.)* (1992), 45 C.P.R. (3d) 449)

[171] Once the construction and scope of the claim have been determined, as was done in Section XI, the question of whether the claim has been infringed is a question of mixed fact and law. The approach to infringement is based upon the purposive construction of the claims (see *Free World*, above).

[172] While the Defendants say that only the Corlac retrofit and the integral stuffing boxes are in issue, the Plaintiffs also claim that the Griffin Enviro stuffing box is infringing. The Court concludes that all the Defendants' stuffing boxes are in issue.

[173] The Defendants' Enviro stuffing boxes function as follows:

- the housing forms a cylinder around the polished rod;
- the polish rod goes through a hollow spindle or mandrel that rotates along with the polish rod;
- there is a space between the inner wall of the housing and the outer surface of the spindle;
- there are "seal carriers" that hold a seal;
- the seals held by the carrier are stationary and form a dynamic seal between the moving spindle and the stationary seals;

- there are open spaces with passages between them;
- the “Polypak” seals in the Enviro devices are intended to rotate with the spindle and polish rod and make a “static seal”;
- the spindle of the Enviro stuffing boxes rotates on its bearings.

[174] As indicated in Exhibit 10, P305, the Corlac integral stuffing box has a hex connection between the drivehead shaft and the spindle. The female hex is built into the configuration of the shaft.

[175] Claim 17 is a stand alone claim which teaches a method of restraining oil leakage in a PC pump that includes a) injecting a lubricant, b) monitoring a leak passage for leaking oil and c) when leaking oil is detected, shutting down the pump and replacing at least those seal cartridges past which the oil has leaked.

[176] The Defendants provided manuals with instructions on how to use the rotating stuffing box. The operating instruction for the Defendants retro and integral Enviro stuffing boxes provides the correct information; the Griffin situation is unclear.

[177] Neither side called customer witnesses and the Court is left with the only logical conclusion it can make which is that customers are more likely than not to follow the instructions in the manuals – particularly sophisticated customers like the oil well operators to whom the products are directed.

[178] The instruction manual contains the following:

- images of the retrofit and integral units;
- a schematic of the stuffing box; and
- the operating procedures.

[179] The Plaintiffs' expert Skoczylas concluded that the Defendants' devices have the same sealing assembly described in Claims 1, 6, 9, 11, 14-16 (although the retrofit units do not include a drive means as per Claims 15 and 16) and the manuals for the devices teach the practice in Claim 17.

[180] Dr. Salant reaches the same conclusions but only with respect to Claims 1, 6, 9 and 11. Even the Defendants' expert Muller concludes that the Corlac devices and the '937 Patent share the same primary sealing elements and configuration.

[181] The Defendants' case against infringement relies significantly on its interpretation of the terms "seal cartridge" and "dynamic seal" (the knife edge corner 92"). Since the Court has not accepted the Defendants' efforts to distinguish its devices based on their claim construction and the Enviro stuffing boxes have the same elements contained in various Claims, it follows that their devices infringe the claim construction advanced by the Plaintiffs and accepted by the Court.

*Claim 1*

[182] The Defendants' defence to infringement lies in the meaning of the terms already defined by the Court. The expert evidence confirms that those essential features of the '937 Patent, as the claim is construed, appear in the Defendants' devices. Therefore, the Defendants' devices infringe Claim 1 of the '937 Patent.

[183] Claims 6, 9, 11 and 13 through 16 of the '937 Patent each depend directly or indirectly on Claim 1. Since Claim 1 is infringed, these other Claims are likewise infringed.

*Claim 6*

[184] The additional feature affecting this Claim is whether the annular wall of the Enviro stuffing box closes the annular space defined by the cylindrical wall of the housing and the outside surface of the rotating sleeve. The question is how "closed" is "closed". The Enviro stuffing boxes have a slightly larger gap between the wall and the sleeve. That gap is immaterial as the purpose of the annular wall is to hold the cartridges in place pressed against the annular wall where the ring is compressed into a recess in one of the carriers.

[185] Therefore, the Corlac devices have both the "seal cartridges" and "annular spaces" described in Claim 6. Claim 6 is infringed.

*Claims 9 and 11*

[186] Claims 9 and 11 require “a plurality of packing elements compressed within said annular cavity”. While the Defendants say that this refers only to conventional static packing, the Court has not agreed with that construction of the Claim.

[187] The terms used encompass U cups and U seals such as the Polypaks used by the Defendants. The terms are not limited to axial compression by a third member.

[188] The evidence establishes that the Enviro stuffing boxes have Polypak seals that are compressed into the annular space at the top of the sleeve to form a static seal and achieve the same function as the packing in the preferred embodiment of the '937 Patent by pressing radially against the rod.

[189] The evidence also establishes that a Skilled Person would contemplate U ring seals as “packing”; thus the term is not restricted to one type of packing so long as it fulfills the function in the same way as outlined in the '937 Patent.

[190] Therefore, Claims 9 and 11 are infringed in at least two aspects.

[191] The Plaintiffs have withdrawn their assertion that Claim 13 has been infringed.

*Claims 14-16*

[192] Both Claims 14 and 15 depend on Claim 1 and to that extent they are infringed. The other feature is whether the two-part sleeve used by the Defendants' integral devices performs the same function, in the same way, to achieve the same result as the two-part sleeve in the '937 Patent.

[193] The Plaintiffs have not made out any case that the retrofit device infringes these claims.

[194] The Defendants rely on the fact that the integral units do not have a framework that includes external thrust and radial bearings, nor does the Corlac sleeve drive the rod.

[195] However, in the integral model, the spindle is connected to the hollow drive sleeve with a hex connection to form a single two-part second member that is supported for rotation by thrust and radial bearings. The spindle has a drive means connected to it for receiving drive torque and has connection means allowing the rod to be supported by the second member.

[196] There is some distinction in form between the integral unit and the '937 Patent (for example, the bearings are located in the annular space and are not external to the stuffing box or positioned within an attached framework).

[197] However, these are distinctions without a difference. Once the two shafts of the Corlac unit are connected by means of the hex connection, they act as a unit to transfer torque. The combined hollow shafts operating as a unit transfer torque to the rod. The Corlac unit is similar to Figures 1

and 2 of the '937 Patent. Therefore, the distinctions relied on by the Defendants are merely of form not substance.

[198] Therefore, Claims 14-15 are infringed in at least two ways by breach of Claim 1 as well as on their own terms. Claim 16 relies on Claim 9 which has been infringed and is also infringed on its own terms.

*Claim 17*

[199] To the extent that Claim 17 imparts the terms “seal cartridge” and “dynamic seal” as construed with respect to Claim 1, Claim 17 is infringed. However, Claim 17 is a method for restraining oil which involves monitoring a leak passage to determine when seals fail. This involves leaving a leak passage open; the Corlac devices are closed. Claim 17 is a method claim but the Plaintiffs concede that they do not have evidence of actual use of the method. They rely on the adverse inference from the Defendants’ failure to call evidence to counter the obvious conclusion that customers would follow instructions. They also rely on expert evidence to the same effect.

*Infringement Conclusions*

[200] As indicated at the beginning of these Reasons, the absence of direct evidence from one or more employees of the Defendants was startling. There was no corporate evidence as to the development of the Defendants’ devices, the knowledge of competing devices, efforts to create a differentiated product or anything else to suggest that there was no intended infringement.

[201] What is evident is that Glenn Schneider, the head engineer of what became Weatherford PC Pump Ltd. which designed rotating stuffing boxes, left his employment shortly before GrenCo licensed his employer. Schneider joined Corlac Equipment and Corlac Equipment began the manufacture and sale of infringing product.

[202] The timing of the change of jobs, the nature of the competitive market for this product then and later and the timing and similarity of the Corlac products calls out for an explanation. Absent an explanation and given the Plaintiffs' evidence of infringement, the Court can and does draw the conclusion that Corlac intentionally set out to create a product which they knew or ought to have known would infringe the '937 Patent.

[203] The Court draws an adverse inference from the failure to call any evidence to explain these actions. The inference is that such evidence would not have assisted the Defendants, indeed in this case it would have more likely than not confirmed the Plaintiffs' allegations.

[204] Therefore, Claims 1, 6, 9, 11, 14, 15, 16 and 17 have been infringed by the Defendants.

*Liability Issues*

[205] As to whether the Defendants induced third parties, the customers, to infringe the '937 Patent, as distinct from the Defendants' own liability for infringement by manufacture and sale, there was no evidence before the Court from any customers. It is only common sense that sales were

made to customers. The amount of sales and related financial information has been bifurcated from this phase of the litigation which in some respects may limit the Court's assessment of the extent of any inducement by the Defendants.

[206] In any event, the Court, having found that there has been infringement by one or more of the Defendants, finds the answer to Issue 3 is affirmative.

[207] As to the issue of joint and several liability with respect to Corlac Equipment and Corlac, the discovery evidence read-in at trial established that Corlac was the parent company of Corlac Equipment, owned all the shares and exercised control over the operations of Corlac Equipment and Corlac Equipment (1998) Ltd. The major shareholder of the Corlac group of companies, Dan Echino, was also President and Director of Corlac and Corlac Equipment.

[208] Corlac Equipment manufactured and sold the drive heads and the stuffing boxes in issue in this litigation.

[209] The integrated operations and business of the Corlac group of companies is evident from not only the common control but the fact that such items as manufacturer's label were firstly in Corlac's name, then that of Corlac Equipment's and drawings of the infringing stuffing boxes and associated parts' lists were under Corlac's name.

[210] Further, stuffing box invoices and work orders were on Corlac Equipment's letterhead and stuffing box sales orders were under Corlac's name from 1999-2001. Finally, the audited consolidated financial statements of Corlac included the earnings and expenses for the sales of rotating stuffing boxes.

[211] The Plaintiffs have raised a reasonable basis from which to conclude that the Corlac group of companies are jointly and severally liable by virtue of common direction and control and benefit from the infringement of the '937 Patent.

[212] As held in *Nedco Ltd. v. Clark et al* (1973), 43 D.L.R. (3d) 714 at paragraph 19, which decision was cited with approval in *Northeast Marine Services Ltd. v. Atlantic Pilotage Authority* (1995), 179 N.R. 17 (F.C.A.), a court will "pierce the corporate veil" to find joint and several liability where one corporation is controlled by the other to the extent that they operate as a unit.

[213] The Defendants, again as with respect to the issue of infringement, put no witness forward to show the absence of control and dominance of the Corlac group. These Defendants were in the best position to put forward that evidence and in the context of this case, the Court is prepared to draw the adverse inference that such evidence would be harmful to these Defendants.

[214] With regard to the National Oilwell defendants, in addition to the common control, direction and benefit from Corlac's infringing activities, they are jointly and severally liable on a related basis. NOC purchased the shares of Corlac Equipment from Corlac Inc. on November 20, 2003. It

was advised by Corlac of GrenCo's claim for infringement prior to making the acquisition. NOC then amalgamated with Corlac Equipment on January 1, 2004.

[215] Having amalgamated, Corlac Equipment continues as a corporation under NOC with all its assets and liabilities including those in respect of the infringement. (See *R. v. Black & Decker Manufacturing Co.*, [1975] 1 S.C.R. 411). *Black and Decker* was cited in *Hoffmann-La Roche Ltd. v. Canada (Minister of Health)*, 2005 FC 1415 for the proposition that under Canadian law after amalgamation two separate corporations continue as one. The British Columbia Supreme Court similarly interpreted the case in *Shoal Point Management Ltd. et al v. ICI Canada Inc*., 2006 BCSC 857. The Court there also cited a Supreme Court of Canada case where the Court refused to overturn the lower Court's finding that an amalgamation agreement which agreed to all liabilities, duties and obligations "immediately proceeding amalgamation" did not limit liability:

> 16 Generally, an entity that results from the amalgamation of companies carries with it the liabilities of the previous entities subject to the applicable legislation: *R. v. Black & Decker Manufacturing Co.*, [1975] 1 S.C.R. 411; *British Columbia Hydro & Power Authority v. British Columbia (Environmental Appeal Board)*, [2005] 1 S.C.R. 3, 2005 SCC 1.

[216] National Oilwell Incorporated (NOI) is the ultimate parent of the amalgamated NOC. NOC's financial results are reported as part of NOI's financial filings. Therefore, absent any contrary persuasive evidence, NOI is the beneficiary of NOC's activities including its infringing activities and liable for the consequences thereof.

[217] NOI is ultimately responsible for the activities of its subsidiaries including NOC.

[218] The evidence establishes that NOI controlled NOC and was the beneficiary of its infringing activities. The precise nature and extent of the benefits is an issue of damages and the Court reserves its further comments on the extent of NOC and NOI liabilities until that phase of this litigation is concluded and where a tracing of profits or disgorgement may be a remedy sought.

[219] The National Oilwell Defendants put in no evidence to counter the evidence of common and complete control by NOI, nor any evidence that NOC and NOI were not beneficiaries of the infringing activities. The Court is then left to draw the adverse inference that the failure to do so confirms that the Plaintiffs' plea as to joint and several liability is correct.

[220] The Court concludes that Corlac and Corlac Equipement are jointly and severally liable for infringement; that National Oilwell Inc. (now National Oilwell Varco Inc.) is jointly liable with National Oilwell Canada Ltd. Due to the amalgamation consequences of NOC and Corlac Equipment, the Defendants are jointly and severally liable with each other for infringement.

*Limitation Periods*

[221] The Defendants have pleaded that the Plaintiffs' claim for infringement is statute barred or limited by reason of the limitation periods cited in paragraph 20 of the Second Amended Statement of Defence and Counterclaim. That paragraph cites the *Patent Act*, the limitation legislation of each province and territory (except Nunavut) and that of the *Federal Courts Act*.

[222] The relevant legislation is the *Patent Act*, R.S., 1985, c. P-4, s. 55.01:

| | |
|---|---|
| **55.01** No remedy may be awarded for an act of infringement committed more than six years before the commencement of the action for infringement. | **55.01** Tout recours visant un acte de contrefaçon se prescrit à compter de six ans de la commission de celui-ci. |

[223] The Defendants by their own argument concede since the earliest of the consolidated actions that had the Statement of Claim issued July 6, 2001, the Plaintiffs are only statute barred from any remedies that may exist prior to July 6, 1995.

[224] As the infringing activities of Corlac and/or Corlac Equipment commenced in late 1999-early 2000, there is no real issue as to limitation periods. The six-year limitation period does not bar the GrenCo/Grenke Plaintiffs' claim, as made, in respect of the Corlac companies or of National Oilwell companies.

*Entitlement to Action and Remedies*

[225] The Defendants' position is that because Art Britton was the true inventor/owner of the '937 Patent and the Plaintiffs had no assignment from him, they had no right to commence this action.

[226] For the reason set forth in the following section “C – Inventorship of the '937 Patent”, Art Britton is neither “the” nor “an” inventor of the '937 Patent nor was he entitled to ownership of the Patent. Any assignment of his rights therein to the Defendants was devoid of substance.

[227] The Defendants contend that the actions of the Plaintiffs, most particularly Grenke in his dealings with the Patent Office in removing Tofts as an inventor, ought to deprive the Plaintiffs of any entitlement to equitable relief particularly injunctive relief.

[228] As outlined in Section D – Validity of the '937 Patent, while Grenke’s conduct raises issues, it is not such as to disentitle him from his ownership of the '937 Patent.

[229] The issuance of injunctive relief is not only a benefit to a successful party but in the public interest to ensure the enforceability of the Canadian patent system.

[230] The precise nature of other remedies, damages, disgorgement and other relief must await the damages phase of this litigation.

[231] Whatever the dealings of Grenke, the fact remains that the Defendants infringed and continue to infringe the '937 Patent. They have used a stuffing box design, subject to some small changes as to packing, connecting apparatus and inconsequential placement of seals, which is the same as the Grenke design.

[232] The Defendants have continued to profit from the sale of the infringing articles and would continue to do so unless injunctive type relief is available. Their actions are unjustified and egregious.

[233] The Defendants have not yet advanced any other arguments to disentitle the Plaintiffs from equitable relief.

[234] The Plaintiffs are entitled to maintain their action and to obtain equitable relief. Issue 8 is answered in the affirmative.

## XIII. C. INVENTORSHIP OF THE '937 PATENT

[235] Issue 9 under this heading concerns whether one or more of Ed Grenke, Art Britton, Walter Torfs, Michael Engelen and/or Andreas Reincke are inventors of the subject matter described and claimed in the '937 patent. There appears to be no shortage of people who had some involvement with the '937 Patent and who now seek the credit and more tangible benefits of being “the” or “an” inventor of this patent.

[236] The key precedent on the issue of determining who is an inventor is *Apotex Inc. v. Wellcome Foundation Ltd.*, [2002] 4 S.C.R. 153 which requires a court to determine “who was responsible for the inventive concept”.

> **97** Section 34(1) requires that at least at the time the patent application is filed, the specification "correctly and fully describe the invention ... to enable any person skilled in the art or science to

> which it appertains ... to ... use it". It is therefore not enough to have a good idea (or, as was said in *Christiani, supra*, at p. 454, "for a man to say that an idea floated through his brain"); the ingenious idea must be "reduced ... to a definite and practical shape" (*ibid.*). Of course, in the steps leading from conception to patentability, the inventor(s) may utilize the services of others, who may be highly skilled, but those others will not be co-inventors unless they participated in the conception as opposed to its verification. As Jenkins J. notes in *May & Baker Ltd. v. Ciba Ltd.* (1948), 65 R.P.C. 255 (Ch. D.), at p. 281, the requisite "useful qualities" of an invention, "must be the inventor's own discovery as opposed to mere verification by him of previous predictions".
>
> **98** More recently, in *Henry Brothers (Magherafelt) Ltd. v. Ministry of Defence and the Northern Ireland Office*, [1997] R.P.C. 693 (Pat. Ct.), in response to a submission that an invention could be divided into contributed elements and patents awarded accordingly, Jacob J. stated, at p. 706:
>
> > I do not think it is right to divide up the claim for an invention which consists of a combination of elements and then to seek to identify who contributed which element. I think the inquiry is more fundamental than that. <u>One must seek to identify who in substance made the combination. Who was responsible for the inventive concept, namely the combination?</u> [Emphasis added.]

[237] Germane to this issue is the Supreme Court's conclusion that a person who contributes to the inventive concept may be a co-inventor while those who help the invention to completion, but whose ingenuity is directed to verification rather than original inventive concept, are not co-inventors.

[238] The burden of proof of co-inventorship rests on the party asserting the claim to sharing in the inventorship. In the present circumstances the Defendants had the burden of proof that on a

balance of probabilities, one or more of Britton, Torfs, Engelen and/or Reincke were “an” or “the” inventor of the '937 Patent. The Defendants must undercut Grenke’s claim to inventorship (as opposed to ownership – the two are not synonymous).

[239] It is important on this issue, as explained in *Apotex*, above, at paragraph 85, that the “inventor” is not just a person who comes up with a general idea or thesis. The inventor must have reduced the idea or thesis to a definite and practical shape by building it as described or by fully describing how it will be practised - showing that there is utility in the claimed invention.

[240] While the same analytical issue arises whether the invention is a combination patent or not, it is the combination itself which is the novelty not the elements of it. As held in *Lovell Manufacturing Co. v. Beatty Brothers Ltd.* (1962), 41 C.P.R. 18, even where certain elements have been contributed by persons other than the inventor named, this would not make them joint inventors of the combination.

[241] The Defendants have taken the approach of breaking down the '937 Patent into various elements, the rotating sleeve, the U ring seals, various arrangements and then attributing contribution by various persons to each of these elements. This is an approach which runs contrary to that laid out in *Apotex*, above.

[242] The ascribed contributions are based on witnesses’ recollection of what was said, or not said, on dates certain or approximated – in few instances is there documentary or other

corroboration. The Defendants try to put Grenke in the role of nothing more than an "assembler" of others' contributions.

[243] The better approach is to examine the evidence as a whole taking account of the "selective" memories, the dimness of recollection and the general absence of documents.

*Edward Grenke*

[244] Grenke's evidence is that he came up with key concepts (a) sealing over a rotating shaft, (b) having multiple leak passages, and (c) including the system integrally with a drive shaft. He acknowledged that others made suggestions but it was he who made the choices of options, determined how the invention should function, and made it function.

[245] The basic thrust of Grenke's evidence is supported by such actions as his visits to Germany to meet with Merkel and Flenders. It was he who led the charge in this case, not Britton. It was he who sought out others for advice, not the other way around. The Court accepts his version of these events as more likely to have happened than other propositions advanced by the Defendants.

[246] Grenke's role in coming up with the idea and turning it into a practical device is supported by the documents. Set out below are the drawings from three inter-related exhibits – Exhibit 10, P144; Exhibit 10, P145 (page 2) and Exhibit 10, P147.

Exhibit 10, P144 (February 1991)

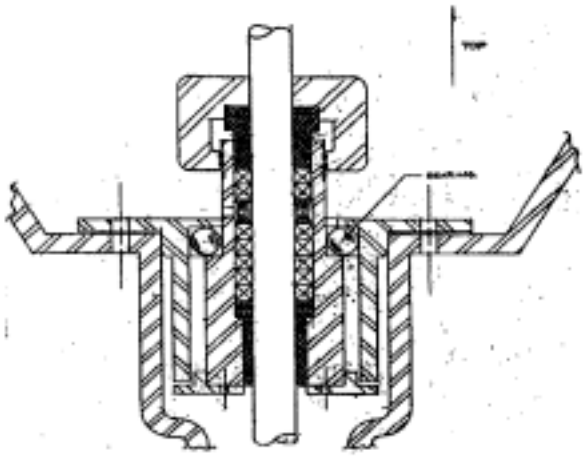


Exhibit 10, P145 (page 2) (March 26, 1991)

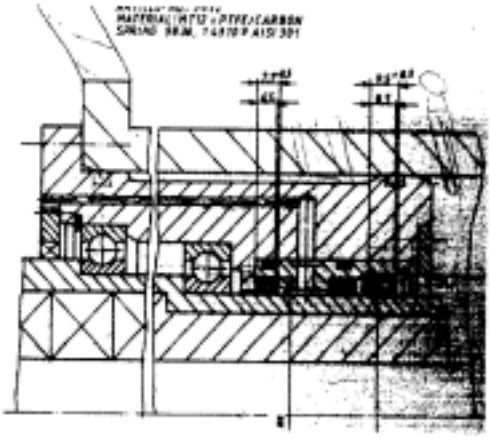
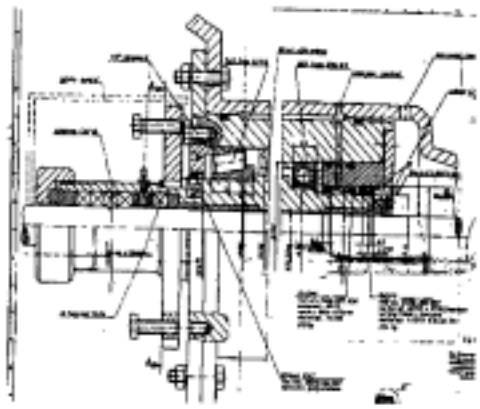


Exhibit 10, P147 (April 22, 1991)



[247] The evidence is that Grenke had his son, Wes (an architectural draftsman), draw a diagram showing an annular space to accept dynamic seals surrounding a rotating shaft or mandrel (Exhibit 10, P144).

[248] Following Grenke's first visit to Merkel, Engelen sent some suggestions for what was in the first diagram but this second diagram (Exhibit 10, P145 (page 2)) shows Grenke's handwritten changes.

[249] The final diagram, Exhibit 10, P147, created under Grenke, was used in the manufacture of the first prototype units in the first half of 1991.

[250] There is other documentary evidence showing Grenke's work on the seal system integrated with the Flenders' gear box, which gear box work was performed with Torfs. Grenke made a sketch of what the system looked like (Exhibit 10, P153) and then had his son put it into proper form in July 1992 (Exhibit 10, P158).

Exhibit 10, P153

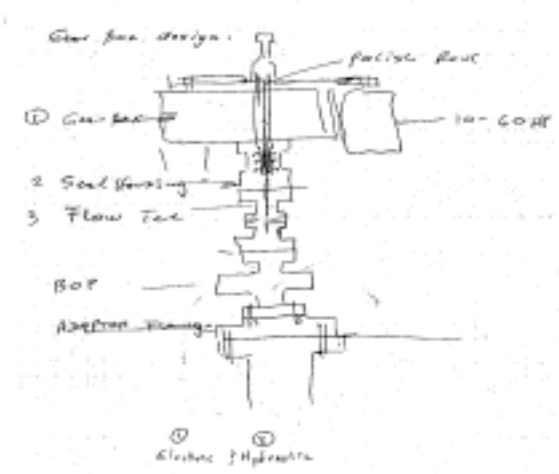
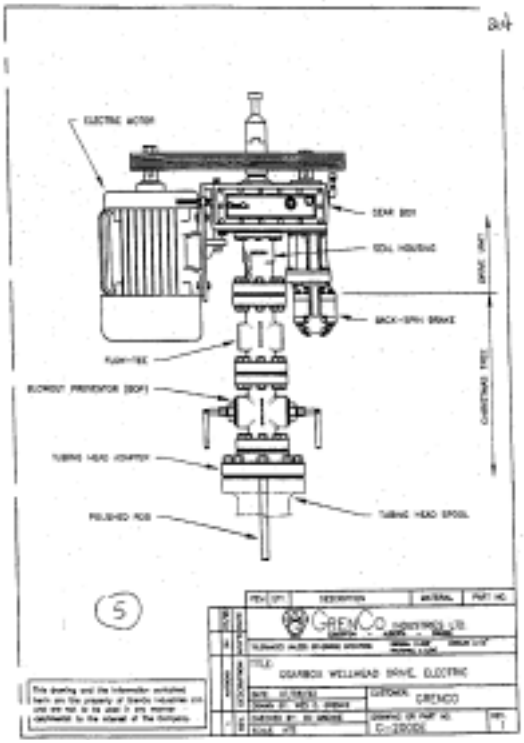


Exhibit 10, P158




[251] Given some of the issues surrounding the first integral sealing units made by Grenke, it was Grenke who redesigned the units in late 1992 and early 1993 to incorporate flanged U rings and two leak passages in the cylindrical portion of the housing as well as a passage in the flange.

[252] The documents support Grenke's evidence that it was he who came up with the three aspects of the '937 Patent referred to in paragraph 244.

[253] The Court concludes that Grenke was "an" inventor of the '937 Patent. The other persons identified by the Defendants (except in the special case of Torfs) as co-inventors are not.

[254] With the exception of Torfs, none of these other inventor claimants asserted any claim of co-inventorship at the Patent Office. Indeed they never asserted the claim against each other. None of Britton, Reincke or Engelen said that they were inventors with each other. None took any legal actions to enforce their claim, either within any limitation period or otherwise.

*Andreas Reincke*

[255] Reincke, who did not claim to be an inventor, suggested to Grenke that he use alternatives to the rope type packing in the prototype units. As an employee of Merkel, Reincke steered Grenke to Merkel products, a situation entirely satisfactory to Grenke. However, the '937 Patent, properly construed, did not include any claims directed to the particular packing suggested by Reincke and he did not co-invent the '937 Patent.

*Michael Engelen*

[256] Engelen, who was the seal expert at Merkel, made a proposal as to the appropriate seals to use in the annular space shown on the drawing (Exhibit 10, P144) sent by Grenke. His proposal was related to the type of dynamic seals not the concept of using dynamic seals in the annular space to seal around the rotating sleeve. The seals proposed by Engelen came from Merkel’s standard catalogue as did the proposal for a seal carrier.

[257] Although Engelen met with Grenke, it was Grenke who made the changes to the proposal that eventually led to the design to be tested. Figure 3 in the '937 Patent included several variations by Grenke of what Engelen had originally proposed.

[258] While Engelen discussed with Grenke the possibility of using multiple leak detection passageways, he confirmed that at that time, April 1991, the prevailing view was that a single leak detection port was sufficient and having more than one such port had several disadvantages.

[259] Engelen's suggestion of flanged U rings as an alternative is not relevant as the claims regarding these rings are not asserted against the Defendants. However, the evidence on this point is that Grenke made the selection of the standard flange arrangement from the various proposals made by Engelen and that Merkel employees were unsure as to whether its seals would work in the concepts which Grenke had.

[260] The Court concludes that while Engelen made some suggestions, he did not contribute "inventive concepts" and cannot be considered as a "co-inventor".

*Art Britton*

[261] The other person, on some basis, said to be the inventor or a co-inventor of the '937 Patent is Britton. His complaint against Grenke, his allegation that in effect Grenke stole his idea, goes back to the allegation that Grenke copied Britton's idea which was outlined on some sort of board in Britton's office at Elk Point in late 1990/early 1991. The attempt by the Defendants to have Britton

draw what was on his office board at the time is extremely tenuous evidence. The exhibit, D-19, was drawn by Britton from memory as if it was a “parlour trick” but his evidence on this aspect was inconsistent with pre-trial evidence.

[262] The Defendants’ claim is that Britton is responsible for the idea of rotating the packing with the polish rod using the sleeve and sealing outside of that sleeve. However, in the fall of 1990, H&R Valve had a similar idea of moving the packing with the rod which likely was the genesis of the concept and what may have been in Britton’s office (if anything).

[263] Moreover, the Defendants cannot establish that Grenke took that concept. At the best there was a concept, an idea, but there is no patent in an idea. H&R Valve had not been able to make the concept work and it is evident that Britton had no idea how to go about giving the concept functionality.

[264] Before Britton met with Grenke in January or February of 1991, neither Britton nor anyone in his EI/CI group at Amoco had a concrete idea about how to solve the leakage problem plaguing the heavy oil industry.

[265] Britton’s evidence on the events in and around Fall 1990 to Spring 1991 is vague, inconsistent and unreliable. Other ex-Amoco witnesses could provide no corroboration of Britton’s account. His subsequent actions in preparing a video in March 1990 which makes no reference to his design and his failure to take a copy of his design to Germany in April 1991 is not consistent

with his claim that he had the idea and the method behind the '937 Patent. As indicated earlier, Britton's animus against Grenke distorts his recollection of events and his evidence at trial was not convincing.

[266] Britton was careful and not open in his dealings with Grenke in 1991. Britton had prepared a first video for the Germany meeting to outline the nature of the problem. He then had a second video prepared which was never shown to Grenke. That video gave credit to Britton's alleged efforts but airbrushed out GrenCo and Grenke.

[267] Britton claims that he had some type of arrangement or contract with Grenke to share in the inventorship, if not the ownership, of what became the '937 Patent. However, Britton was hired by GrenCo as a salaried sales manager from October 1991 to August 1995 with no mention of inventions or rights therein.

[268] There is no doubt that Britton had ideas and that he saw a market for finding a solution to the stuffing box leakage problem. So did Grenke. Britton even went to GrenCo's competitor Highland/Corod in 1991, prior to joining GrenCo, to seek a partner in developing a solution.

[269] The relationship between Grenke and Britton while Britton was an employee could be charitably characterized as "careful". Any response by Grenke to Britton's inquiries about patents and participation were non-committal. It is evident that Grenke had no intention of sharing anything

about the inventorship or ownership of the '937 Patent with Britton – a fact which Britton knew for a considerable period of time.

[270] The fact remained that Britton never had an arrangement for sharing in the patent and his most direct *ex post facto* attempt in 1995 to claim a meaningful role in the development of the patent was rebuffed by Grenke.

[271] When Britton resigned, his resignation letter made no mention of patent rights, inventorship royalties or ownership. He took no steps subsequent to 1996 when he left GrenCo to assert any rights or claims with respect to the '937 Patent when he knew or ought to have known that Grenke was pursuing this path including seeking patent protection without any recognition of Britton.

[272] The Court concludes that Britton has no claim to inventorship and/or ownership in whole or in part to the '937 Patent.

*Walter Torfs*

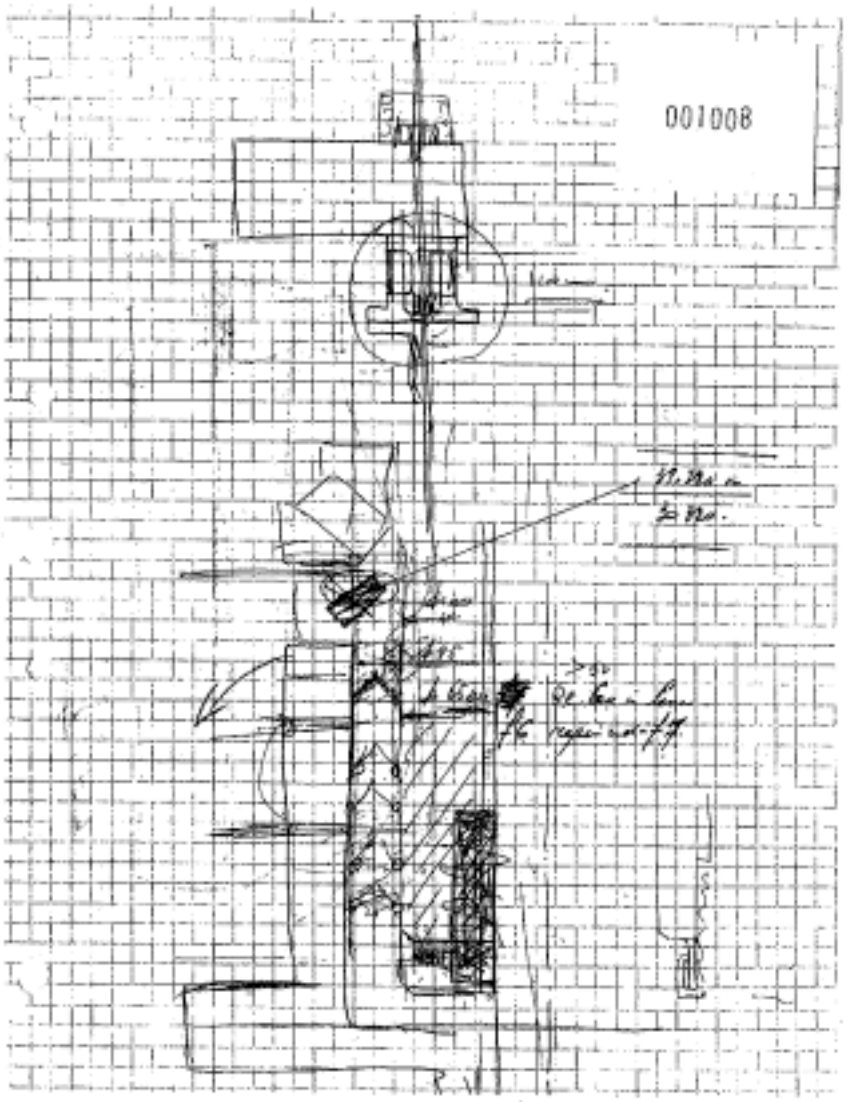
[273] The evidence regarding Torf's contribution to the '937 Patent is more enigmatic. The Court is asked to divine from snippets of documentary evidence and hazy recollections of others, since Torfs unfortunately is deceased and the trade mark agent Reider was too ill to testify, that Torfs was "an" inventor of the '937 Patent.

[274] Given Torfs' expertise with drivehead assemblies, it is improbable that he was the source of inventiveness for the sealing assembly which was Grenke's area. Even Britton, who interestingly does not claim co-inventorship with Torfs, cannot recall Torfs making specific suggestions with respect to the sealing arrangements.

[275] Although Torfs gave Reider his own drawings of the sealing assembly, the key aspects of Torfs' drawings came from Grenke and Torfs' drawings were consistent although not identical to those of Grenke.

[276] The most opaque area is the contribution to the integration of the GrenCo sealing assembly with the drivehead. The evidence establishes that it was Grenke who initiated the work on the integration of the drivehead commencing with his effort to locate Torfs at the Hanover trade show in April 1991. But it was Torfs who had the drivehead expertise and was essential to any integration efforts.

[277] The Defendants placed considerable emphasis on an undated hand drawn sketch purportedly made by Torfs (Exhibit 10, D341, page 1008) shown below:




The sketch presumably shows more than one leak passage in the sealing assembly. The Defendants use this document to suggest that Torfs came up with the idea for multiple leak detection points. This is inconsistent with Manicke's evidence that Britton came up with the idea – an idea for which Britton himself makes no claim.

[278] The only witness who tries to guess at the documents (and others related to it) and the significance thereof is Manicke. No one from Flenders was called to explain what is in reality the property of Flenders, Torfs' employer. Manicke's evidence on this is unreliable and involved guess work. He recalls a meeting discussing multiple leak detection passageways, a recollection said to be stimulated by seeing the drawing. No one else supposedly at this meeting testified on the point and the substance of the meeting was never put to either Grenke, his son Wes or even Britton.

[279] Magda Torfs was called and, as indicated, she was intent on preserving her husband's good name. However, her identification of two arrow figures on the exhibit as being in her husband's handwriting adds nothing to what they signify – she simply did not know what any of the writing meant.

[280] Everything about this document and a great deal of whatever else was said about Torfs' contribution to the '937 Patent was speculation. It does not meet in and of itself the burden put on the Defendants to show that someone else, Torfs in this case, was a co-inventor.

[281] Were it not for Grenke's arrangement with Torfs that they would share in the patents equally, the Court would be uncomfortable with concluding that Torfs contributed any creative concept to the '937 Patent itself. However, Grenke cannot resile from that arrangement and his efforts to do so are considered later with respect to misrepresentation to the Patent Office. Moreover, Torfs as a contributor in the area of drive heads on an integral unit is consistent with a conclusion that he was "an" inventor.

## XIV. D. VALIDITY OF THE '937 PATENT

[282] The Defendants raised a number of challenges to validity of the '937 Patent including anticipation more than one year prior to the filing date, obviousness on the same basis, misrepresentation in the Patent petition by Grenke, misrepresentations by Torfs, abandonment of the Patent by reason of not acting in good faith in dealings with the Patent Office and lastly ambiguity in the claim. These matters are covered in Issues 10-15.

### *Disclosure more than One Year prior to the Filing Date*

[283] The Defendants claim that the '937 Patent was anticipated because its subject matter was disclosed to the public contrary to s. 28.2(1)*(a)* of the Act as early as April 1991 a) during the trip to Merkel, b) to Flenders Canada and c) from as early as June 21, 1991, to Amoco and other non-Amoco personnel when a rotating stuffing box was installed at Elk Point, and to the oil industry and to Pan Canadian in particular. The Defendants also claim that a number of prior publications disclose the subject matter of the Patent claims.

[284] There is no real issue between the parties on the legal principles to be applied to whether the '937 Patent was anticipated. Section 28.2(1) sets out the basic principles:

| | |
|---|---|
| **28.2** (1) The subject-matter defined by a claim in an application for a patent in Canada (the “pending application”) must not have been disclosed | **28.2** (1) L’objet que définit la revendication d’une demande de brevet ne doit pas: |

| | |
|---|---|
| (*a*) more than one year before the filing date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant, in such a manner that the subject-matter became available to the public in Canada or elsewhere; | *a*) plus d'un an avant la date de dépôt de celle-ci, avoir fait, de la part du demandeur ou d'un tiers ayant obtenu de lui l'information à cet égard de façon directe ou autrement, l'objet d'une communication qui l'a rendu accessible au public au Canada ou ailleurs; |
| (*b*) before the claim date by a person not mentioned in paragraph (*a*) in such a manner that the subject-matter became available to the public in Canada or elsewhere; | *b*) avant la date de la revendication, avoir fait, de la part d'une autre personne, l'objet d'une communication qui l'a rendu accessible au public au Canada ou ailleurs; |
| (*c*) in an application for a patent that is filed in Canada by a person other than the applicant, and has a filing date that is before the claim date; or | *c*) avoir été divulgué dans une demande de brevet qui a été déposée au Canada par une personne autre que le demandeur et dont la date de dépôt est antérieure à la date de la revendication de la demande visée à l'alinéa (1)*a*); |
| … | … |

[285] There are two aspects which the Defendants must establish to succeed as outlined in *Apotex Inc. v. Sanofi-Synthelabo Canada Inc.*, 2008 SCC 61:

1. the prior publication must disclose subject matter that would infringe the claim at issue if practised – "what would infringe if later, anticipates if earlier".
2. the prior publication must enable a person skilled in the art to practise that subject matter without undue trial and error.

[286] At the disclosure stage, the skilled person is deemed to be trying to understand what the author meant in the description of the prior art publication. There is no reason for trial and error or experimentation but simply reading for purposes of understanding.

[287] At the enablement stage, following disclosure, a certain amount of trial and error or experimentation is permitted to get the subject matter to work.

[288] The skilled person may use common general knowledge to supplement information contained in the prior publication but not to the extent of undue burden or inventive steps.

[289] Germane to the issue of anticipation is the principle that a prior unrestricted sale may constitute anticipation. The subject matter has to "become available to the public in Canada or elsewhere".

*Disclosure to Amoco/Pan Canadian*

[290] The Defendants have alleged that sales to Amoco and Pan Canadian were made more than one year prior to the filing date. As such, the Defendants have alleged invalidity due to obviousness, anticipation and deemed abandonment by virtue of failure to disclose the sales to the Commissioner of Patents. The issue of those sales is addressed below and the findings apply to all the issues in which these sales have been raised.

[291] The Defendants have alleged, both under a claim of obviousness, anticipation and abandonment by reason of failure to disclose prior art, that the sales of stuffing boxes to Amoco and Pan Canadian in 1991 and 1992 constituted disclosure to the public more than one year prior to the patent filing.

[292] A single sale can constitute public disclosure, as held in *Baker Petrolite Corp. v. Canwell-Enviro Industries Ltd.* (2002), 17 C.P.R. (4th) 478 (FCA). The issue is not the sale itself but what flows from it – disclosure of the invention. The relevant issue here is the circumstances of that disclosure and whether such disclosure was to the public.

[293] The evidence on whether the sales were subject to some form of confidentiality obligation or limitation on disclosure is somewhat inconsistent. Generally those "in the field", working on the wellhead equipment, thought that they could say or do anything they wanted with any of the knowledge of the stuffing box invention, those further up the corporate chain recognized the need for confidentiality, the obligation not to disclose and the limitations continued even where the companies had been invoiced for the product.

[294] The relationship between Amoco and Grenke was closer than that of Pan Canadian but each of those companies was engaged in a "common cause" to find a way to eliminate leakage from stuffing boxes. It was essential in finding the solution that products be tested and proven. There were no test facilities available to Grenke, as was apparent to the two companies. The only way to establish utility, to make necessary improvements on design and to finalize the invention to be

patented was to engage in field tests. This was obvious to both companies and both had an interest in the eventual perfection of the invention.

[295] In Amoco's case, it was involved with Grenke in the creation and showing of a video outlining the problems faced and to be shown to Merkel. Britton, acting for Amoco, attended a meeting with Merkel as well for the purpose of development of the invention. Amoco's assistance was integral and essential to proving the invention.

[296] The units in question, the retrofit models, were a limited production of six to eight. Units were sold to each of Amoco and Pan Canadian at a time when Grenke continued to work on the product development based in part on feedback from the companies on how the units were performing in the field. Even Britton acknowledged that testing on the units extended into mid-1992.

[297] It may have been unwise for Grenke not to have established a confidentiality regime with Amoco and Pan Canadian but given the nature of the cooperative working arrangement, it was not unreasonable for him to believe that he had no fear that disclosure would permit Amoco and Pan Canadian to do with the product what they wished – including producing their own. Nor would he have reason to believe that disclosure to those companies was for anything other than a limited purpose and certainly not a disclosure to the public. Both companies' behaviour was consistent with Grenke's view of the confidentiality of the product.

[298] As held in *Lac Minerals Ltd. v. International Corona Resources Ltd.*, [1989] 2 S.C.R. 574, a relationship of trust and cooperation is a factor in determining whether a communication takes place with an expectation of confidence. That type of relationship existed here as between Grenke and Amoco and Grenke and Pan Canadian.

[299] Again, referring to *Lac Minerals*, industry practice may be considered in determining what reasonable expectation parties may have regarding confidentiality and how the parties may behave as a result.

[300] Industry evidence in this case confirmed that parties acting in a common cause and those using prototypes or proposing tentative solutions expected and received confidential treatment. This is consistent with ethical business practices, acknowledged to be part of the *modus operandi* of both corporations, and particularly the case where parties are facing a common problem, local in nature at the time and in field operations in remote areas where the sense of interdependence may be heightened. That degree of dependence and thus of good faith is elevated by the working circumstances.

[301] While personnel in the maintenance departments may have felt no compunction to speak about the products, especially among their colleagues in the area, supervisors such as Ron Johnson, District Foreman of Amoco, recognized that the units were prototypes under test with Amoco. He expected that his Amoco people would keep those units (or at least their internal workings) within the Amoco group of personnel.

[302] There was one instance of an Amoco presentation on the Grenke units made to 30-50 people at a community hall outside the Amoco facility. The evidence is not sufficiently precise and persuasive that what was disclosed was the essence of the invention. The fact that the units were being tested by Amoco was well-known in the area; a testament to the close relationship between Grenke and Amoco but that knowledge is not disclosure of the invention itself.

[303] While Pan Canadian did not work as closely with Grenke as Amoco in the development of the stuffing box, the Defendants in their submissions rely on largely similar factual basis to claim that the sale on April 30, 1992 (more than one year before the filing date) was a disclosure to the public.

[304] While there is some debate about the actual delivery date and the documentation supporting a sale earlier than one year was not entirely complete, it is clear that at some time at least as late as April-May 1992, Britton disclosed the inner workings to Pan Canadian representatives negotiating the purchase of the units.

[305] Given that Pan Canadian was in a similar situation as Amoco, with the same problem, seeking the same solution and knowing that Grenke was working on that solution, the disclosure to Pan Canadian was intended to be limited to Pan Canadian. This is a fact which Pan Canadian knew or ought to have known. There is nothing to suggest that Pan Canadian saw this disclosure as

anything other than for a limited purpose related to development of the commonly sought solution to the stuffing box problem.

[306] It is evident that Grenke did not disclose the information (or permit Britton to disclose if he ever had that permission) to either Amoco or Pan Canadian with a view that it was a public disclosure nor was he reckless in the matter of disclosure. Under all the circumstances, he had good reason to believe that the essence of his invention would not be disclosed to the public and until he was ready to do so and in fact that was the case in respect of both corporations.

[307] The Defendants also rely on what they describe as disclosures to third parties – rig crews, flush-by crews, service crews and even casual observers – occurred when the units were installed and serviced at Amoco and Pan Canadian. There is no evidence of what these people were told about the inner workings of the units or what they observed. Observation of the assembled unit, as presented as Exhibit P-28-A, would disclose nothing about the internal workings.

[308] The Defendants have strenuously argued that the prototype units contained all the essential embodiments of the '937 Patent and therefore disclosure of the prototype was disclosure of the invention. Considerable reliance is placed on Grenke's admissions on discovery that the prototypes had all the essential elements and the opinions of the Defendants' experts.

[309] The Plaintiffs have attempted to resile from the discovery admission without leave of the Court. Since the Defendants knew of the Plaintiffs' changed position and admissions at discovery

are matters which can be withdrawn, the Court fails to see much merit in the Defendants' position. Moreover, the admission is one at least of mixed fact and law, an area where a witness has limited ability to comment. What is germane is that Grenke believed that with the prototype he had essentially solved the problem of leaking stuffing boxes. The balance of work to the final design was improvements but they were significant. There is a difference between believing that one has the solution to the problem and finalizing the design and function so that the invention operates as intended. Grenke's admissions must be seen in that light.

[310] To the extent that the Defendants' position relies on its expert evidence versus that of the Plaintiffs, for reasons earlier stated, the Court prefers the Plaintiffs' expert evidence.

[311] The resolution of the issue of the early disclosure has been based on the assumption or presumption that the disclosure of the prototype was the disclosure of the invention. That disclosure did not constitute obviousness or abandonment (as pleaded by the Defendants) because the disclosure was not to the "public".

[312] The Defendants rely upon the disclosures to Merkel and Flenders Canada prior to April 1991 as one of the basis for alleging anticipation. Whatever the state of the subject matter prior to April 1991 – whether it was patentable or not – Grenke and GrenCo's relationship with both Merkel and Flenders was such that any disclosure was subject to a duty of confidentiality, and no such disclosure could be considered as making the invention "available to the public".

[313] In the case of Merkel, it was working with a customer to help with solutions and to sell its own products with the common object of finding some solutions to the stuffing box problem. To suggest that Merkel could legally take the Plaintiffs' ideas and work and use them as its own is not sustainable. Merkel did not have that right and never claimed it had any such right. There is no evidence that it behaved in any manner other than with a duty of confidence.

[314] To an even greater extent, Flenders was subject to confidentiality obligations and expectations. There is no suggestion that Grenke could have purloined Flenders' (Torfs) work on the rotary engine or Flenders could take and use Grenke's work. These parties were engaged in a common endeavour which was recognized in the co-inventorship arrangement between Grenke and Torfs.

[315] The principle of confidentiality is well described in *Lac Minerals*, above, at page 612:

> In particular, where information of commercial or industrial value is given on a business-like basis and with some avowed common object in mind, such as a joint venture or the manufacture of articles by one party for the other, I would regard the recipient as carrying a heavy burden if he seeks to repel a contention that he was bound by an obligation of confidence:

[316] In the circumstances of this case, there are the interrelated obligations of confidence and the absence of making the invention "available to the public". The disclosure by Grenke to Merkel and Flenders did not constitute making the subject matter of the '937 Patent available to the public. The disclosure was private and for a limited purpose to facilitate the development of the invention.

Given the nature of the respective relationships, while in hindsight it might have been preferable, it was not necessary to set up a formal non-disclosure regime. The parties understood the nature of the relationship and their duties to each other.

[317] The Defendants also alleged that the subject matter of the Patent was disclosed in a list of U.S. patents, industry handbooks and other publications contrary to s. 28.2(1)*(b)* of the Act.

[318] However, the expert evidence referred to earlier in this decision, as accepted by this Court, has rejected the argument that the prior art disclosed the subject matter of the Patent. Therefore, there was no anticipation by reason of disclosure in the prior art as pleaded by the Defendants.

*Obviousness by Reason of Prior Disclosure*

[319] The issue raised by the Defendants is an attack on the '937 Patent based upon the lack of inventiveness in the Patent. Section 28.3 of the Act sets forth the legal criteria for this challenge to validity:

| | |
|---|---|
| **28.3** The subject-matter defined by a claim in an application for a patent in Canada must be subject-matter that would not have been obvious on the claim date to a person skilled in the art or science to which it pertains, having regard to | **28.3** L'objet que définit la revendication d'une demande de brevet ne doit pas, à la date de la revendication, être évident pour une personne versée dans l'art ou la science dont relève l'objet, eu égard à toute communication : |
| (*a*) information disclosed more than one year before the filing date by the applicant, or by a | *a*) qui a été faite, plus d'un an avant la date de dépôt de la demande, par le demandeur ou |

| | |
|---|---|
| person who obtained knowledge, directly or indirectly, from the applicant in such a manner that the information became available to the public in Canada or elsewhere; and | un tiers ayant obtenu de lui l'information à cet égard de façon directe ou autrement, de manière telle qu'elle est devenue accessible au public au Canada ou ailleurs; |
| (*b*) information disclosed before the claim date by a person not mentioned in paragraph (*a*) in such a manner that the information became available to the public in Canada or elsewhere. | *b*) qui a été faite par toute autre personne avant la date de la revendication de manière telle qu'elle est devenue accessible au public au Canada ou ailleurs. |

[320] The most commonly cited articulation of the test for obviousness is Justice Hugessen's statement at page 294 of *Beloit Canada Ltd. v. Valmet Oy* (1986), 8 C.P.R. (3d) 289:

> The test for obviousness is not to ask what competent inventors did or would have done to solve the problem. Inventors are by definition inventive. The classical touchstone for obviousness is the technician skilled in the art but having no scintilla of inventiveness or imagination; a paragon of deduction and dexterity, wholly devoid of intuition; a triumph of the left hemisphere over the right. The question to be asked is whether this mythical creature (the man in the Clapham omnibus of patent law) would, in the light of the state of the art and of common general knowledge as at the claimed date of invention, have come directly and without difficulty to the solution taught by the patent. It is a very difficult test to satisfy.

That test has been modified by Rothstein J. in *Sanofi*, above.

[321] The Defendants rely in this regard on the same disclosure referred to in paragraph 283 of these Reasons, as being "available to the public". For the same reasons, this Court holds that there was no such disclosure to the public.

[322] The Defendants rely on the same prior art described in paragraphs 317-318 and which the expert evidence does not support a conclusion that the claims in the '937 Patent would have been obvious to a person having reasonable skill in the art.

*Misrepresentation/Misleading Statements*

[323] At issue here is whether Grenke made material misrepresentations or material willful misstatements in the Patent petition by claiming that he was the inventor of the '937 Patent. In that regard the Defendants repeat some of their allegations of inventorship by persons other than Grenke.

[324] The Defendants' Statement of Defence alleges that the misstatements/misrepresentations are that Grenke is the inventor whereas in fact:

- Grenke is not the true inventor; Art Britton is.
- or Art Britton is a co-inventor with Merkel representatives and/or Torfs.
- or Art Britton, Grenke and/or Torts are co-inventors.

[325] The Defendants further claimed that Grenke amended the Patent petition so as to claim sole inventorship and ownership of the '937 Patent and two other patents not in issue by removing Torfs as the co-inventor and co-owner.

[326] The last misstatement/misrepresentation alleged is that of Grenke as the person entitled to ownership of the '937 Patent whereas the persons entitled to ownership include one or more of Art Britton, National Oilwell Canada, Corlac, Merkel, Messrs. Reincke, Engelen, Dunn and Manicke.

[327] Section 53(1) of the Act relied upon by the Defendants voids a patent which is grounded on a material untruth in the petition. The provision also refers to omissions or additions in the specifications and drawings but this part of s. 53(1) is not relevant here.

| | |
|---|---|
| **53.** (1) A patent is void if any material allegation in the petition of the applicant in respect of the patent is untrue, or if the specification and drawings contain more or less than is necessary for obtaining the end for which they purport to be made, and the omission or addition is wilfully made for the purpose of misleading. | **53.** (1) Le brevet est nul si la pétition du demandeur, relative à ce brevet, contient quelque allégation importante qui n'est pas conforme à la vérité, ou si le mémoire descriptif et les dessins contiennent plus ou moins qu'il n'est nécessaire pour démontrer ce qu'ils sont censés démontrer, et si l'omission ou l'addition est volontairement faite pour induire en erreur. |

[328] The Court has earlier concluded on the allegations of inventorship or ownership of the multitude advanced by the Defendants. The only substantive issue to be resolved is that regarding Grenke's amendment application to remove Torfs as an inventor and thereby be listed as the sole inventor.

[329] The law, as set out in *Apotex Inc. v. Wellcome Foundation Ltd.*, above, requires that in order for s. 53(1) to void a patent, the statement was material and untrue. The statement must be material

to the granting of the patent – to whether the patent would be granted on those terms in the patent. It is important to note that in this case, the misrepresentation was not contained in the petition itself.

[330] The issue date of the patent is the relevant date for the application of s. 53(1) such that if a prior statement was untrue but became true by the issue date or the statement was corrected, the patent would not be void. As held in *Jules R. Gilbert Ltd. v. Sandoz Patents Ltd.*, [1970] Ex. C.J. No. 1; 64 C.P.R. 14 at para. 117:

> I do not accept this interpretation of s.55(1). The section is expressed in the present tense and it commences with the words, "A patent is void."This I take to mean that the patent is void from the time of its issue but as I read it it cannot refer to any earlier time. The time of issue of the patent accordingly is I think the time at which the truth of the allegations in the patent must be considered. It is at that moment that they become the basis on which patent rights are granted. If at that moment they are untrue and if they are material the basis for the grant of a patent is lacking and the patent is void, but an untrue allegation made earlier but corrected before issue of the patent would not, in my opinion, avoid the grant.

[331] While there may be debate that s. 53(1) always requires willfulness to mislead, the weight of authority suggests that the focus is on materiality. While willfulness may add colour to the misstatement, as acknowledged by the Defendants, even an untrue statement made with something less than a purpose to mislead, will void a patent if it is material.

[332] What is material is fact specific and must be considered as of the time that the grant is made. The question is whether Grenke's affidavit, in which he claimed sole inventorship and that the

naming of Torfs on the petition was a mistake, was a material misrepresentation at the time the '937 Patent was issued.

[333] As held in *Procter & Gamble Co. v. Bristol-Myers Ltd.* (1978), 39 C.P.R. (2d) 145 (FCTD), the misstatement must be material to the "public" and in a practical sense material to the Commissioner of Patents. The question is whether the misstatement made a difference to the issuance of the patent – the rights contained therein.

[334] The Plaintiffs suggest that the naming of the inventors is not particularly important and is more in the nature of a formality in part because inventorship does not necessarily equate with ownership. That position is partly true but where inventorship is important, such as according a person notice of the petition, the correct naming of the inventor may be material (see *Procter & Gamble*, above).

[335] The Plaintiffs have attempted to explain away Grenke's request for amendment to delete Torfs as an inventor and his affidavit justifying the change as based on his confusing or mixing the concepts of inventorship and ownership. The Court does not accept that explanation. Grenke made the change not only because he had acquired all the rights to the Patent through the assignments from Flenders and the Torfs estate but because he perceived that Torfs had "cut him out" of other patents which he believed should be in their joint names.

[336] Grenke had by agreement acknowledged Torfs as a joint inventor – indeed under cross-examination he conceded the same. The Court does not find his explanation credible.

[337] However, from the standpoint of validity of the Patent, Grenke's misstatement is not material at the time of the Patent's issuance. At that time Grenke had acquired, to the extent necessary, all the right title and interest in the Patent from Torfs' employer who had the legal interest in the Patent and from Torfs' estate to the extent that the estate might have had a claim. The naming of Torfs on the Patent as a co-inventor after he had died would have been a nice gesture of recognition but would have had no relevance to the validity of the Patent, its ownership or any rights of inventorship.

[338] To the extent that Grenke signed an affidavit which contained an untrue statement, the appropriate recourse is not to void the Patent and allow the Defendants' infringement to continue. If the matter is as serious as alleged, the proper recourse is to refer the matter to the Attorney General of Canada and/or the Commissioner of Patents for such action as they may deem appropriate. Since the patent agent was involved with the offending affidavit, and he was unable to testify, it would be improper to find that he was knowingly involved in advancing material untruths.

[339] Therefore, the Patent is not void by reason of Grenke's misstatement in respect to the amendment to the petition for the '937 Patent. The other patents referred to by the Defendants are not relevant to this litigation.

*Other Alleged Misrepresentations*

[340] This issue is an alternative plea based on the assumption that Torfs was not a co-inventor and therefore the original petition contained a misleading statement.

[341] For reasons already given, Torfs was a co-inventor and therefore this issue is irrelevant. Further, if Torfs was not a co-inventor, his misstatement was corrected before the Patent issued.

*Abandonment*

[342] The Defendants, although not pleading s. 73(1)*(a)* of the Act, rely upon it to challenge the validity of the Patent, on facts raised either under "obviousness" (prior disclosure) or under "s. 53" (misstatements).

[343] Section 73(1)*(a)* reads:

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| **73.** (1) An application for a patent in Canada shall be deemed to be abandoned if the applicant does not | **73.** (1) La demande de brevet est considérée comme abandonnée si le demandeur omet, selon le cas : |
| (*a*) reply in good faith to any requisition made by an examiner in connection with an examination, within six months after the requisition is made or within any shorter period established by the Commissioner; | *a*) de répondre de bonne foi, dans le cadre d'un examen, à toute demande de l'examinateur, dans les six mois suivant cette demande ou dans le délai plus court déterminé par le commissaire; |

[344] The Defendants argue that s. 73(1)*(a)* gives them a right to challenge the validity of the Patent on the basis of this subsection as if it is a supplement to s. 53. However, at paragraph 61 of *G.D. Searle & Co. v. Novopharm Ltd.* (2007), 56 C.P.R. (4th) 1, the Court held that there is no right in a third party to invalidate a patent for fraud or lack of good faith during the prosecution of the application. It would be stretching the meaning of s. 73 to read in a right to strike down a patent after it is issued on the basis of deemed abandonment during its prosecution unless all the constituent elements of s. 73 are met.

[345] Section 73 read as a whole is not directed primarily at the validity of a patent once issued. The provision is directed at controlling the prosecution of the patent process. The term "abandonment" itself gives an indication that the provision is not directed to post-issuance validity.

[346] Section 73(3) which allows for reinstatement of the patent prosecution upon rectification of the various steps of "deemed abandonment" also shows that the provision is not directed at validity challenges but at prosecution stages.

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| **73.** (3) An application deemed to be abandoned under this section shall be reinstated if the applicant | **73.** (3) Elle peut être rétablie si le demandeur : |
| (*a*) makes a request for reinstatement to the Commissioner within the prescribed period; | *a*) présente au commissaire, dans le délai réglementaire, une requête à cet effet; |
| (*b*) takes the action that should have been taken in order to avoid the abandonment; and | *b*) prend les mesures qui s'imposaient pour éviter l'abandon; |

| | |
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| (*c*) pays the prescribed fee before the expiration of the prescribed period. | *c*) paie les taxes réglementaires avant l'expiration de la période réglementaire. |

[347] There is no doubt a duty to act in good faith in dealing with the Patent Office, as recognized by Justice Hughes in *G.D. Searle*, above, but that duty must be read in the context of other provisions such as s. 28.3 (obviousness) and s. 53(1) (material misstatement). Unless an examiner issued a requisition, a matter which did not fall within either of these provisions would not give rise to any duty under s. 73.

[348] Even if the Defendants had a right to challenge the validity of the '937 Patent on the basis of s. 73(1), there is no evidence that an examiner in the Patent Office made any "requisition" as to prior art (which includes the sales to Amoco/Pan Canadian) nor as to inventorship or anything else germane to this issue.

[349] While s. 73(1)*(a)* was enacted in 1989 (subsequently repealed and substituted by S.C. 1993, c. 15, s. 52 which came into force on October 1, 1996) and cases prior to that date concerning the duty of candor must be read with some degree of caution, the Federal Court of Appeal in *Bourgeault Industries Ltd. v. Flexi-Coil Ltd.* (1999), 86 C.P.R. (3d) 221 at paragraphs 26-31 has rejected the notion that a patent can be held to be invalid for alleged breach of the duty of candor, which goes beyond compliance with the provisions of the Act.

> **29** With respect to the alleged duty of general disclosure of prior art, the trial judge properly found that the disclosure required under Patent Rule 21 and Form 24 does not extend to a description of prior art. Furthermore, and contrary to what the trial judge found, no

request for prior art in a foreign country was made by the examiner under Patent Rule 40.

**30** At the hearing, counsel for Flexi-Coil relied heavily on the most recent decision of the Supreme Court of Canada in *Cadbury Schweppes Inc. v. FBI Foods Ltd* to suggest a higher duty of disclosure than that already required by law or by the jurisprudence. He referred in particular to the following passage from Mr. Justice Binnie's reasons, at paragraph 46:

> I do not think that the respondents' reliance on intellectual property law is of much assistance here. It ignores "the bargain" that lies at the heart of patent protection. A patent is a statutory monopoly which is given in exchange for a full and complete disclosure by the patentee of his or her invention. The disclosure is the essence of the bargain between the patentee, who obtains a 17-year monopoly on exploiting the invention, and the public, which obtains open access to all of the information necessary to practise the invention. Accordingly, at least one of the policy objectives underlying the statutory remedies available to a patent owner is to make disclosure more attractive, and thus hasten the availability of useful knowledge in the public sphere in the public interest [...]

**31** Counsel reads more into this passage than is permissible. The issue before the Court related to breach of confidence and trade secrets. The "full and complete disclosure by the patentee of his or her invention" to which Binnie J. refers can only be, in my view, that which the statute, the rules and the jurisprudence already require. Furthermore, even if the duty of disclosure had been extended as suggested by counsel, the impact of the extension would be felt not at the level of the validity of the patent but at the level of the remedies where equitable considerations might come into play.

[350] In responding to the Patent Office through his patent agent, Grenke was entitled to do so as an owner and ultimately the owner. Therefore there was nothing improper in the agent responding on behalf of one or more of the owners.

[351] The issue of the provision of Grenke's affidavit claiming sole inventorship has already been held not to be a material misstatement nor a willful misleading as contemplated in s. 53(1). Further, there was no requisition from an examiner at issue in this litigation.

[352] With respect to prior art, the examiner never requisitioned the production of "all" prior art. The key prior art non-disclosure is the disclosure to Amoco and Pan Canadian, matters already dealt with under "Obviousness".

[353] Consequently, the '937 Patent is not invalid or deemed abandoned by reason of s. 73(1) as alleged by the Defendants.

*Ambiguous Terms*

[354] The Defendants have not provided any cogent evidence that the terms complained of in the '937 Patent are obscure or ambiguous. Further, this point was not addressed in substance (if at all) during the trial.

[355] On the facts said to constitute "deemed abandonment", a) the prior art said not to be disclosed is the sale of rotating stuffing boxes to Amoco and Pan Canadian in 1991 and 1992, b) providing the affidavit that Grenke was the sole inventor, and c) responding to all requisitions as if Grenke was the sole inventor and/or sole owner. These have been dealt with earlier in these Reasons.

## XV. E. RECTIFICATION OF THE PATENT OFFICE

[356] Issues 16-18 address the manner in which the Court should deal with the ownership of the Patent by National Oilwell Canada. It assumes that Art Britton is the inventor or co-inventor.

[357] As this Court has found that Art Britton was neither an inventor nor co-inventor and had no right, title or interest in the Patent, Issues 16-18 are irrelevant and need not be answered.

## XVI. F. INFRINGEMENT BY THE PLAINTIFFS

[358] Issues 19-24 are subsumed under this heading and deal with the Plaintiffs' alleged infringement of the "Defendants'" '937 Patent and the remedies which flow therefrom.

[359] Again, as the Court has found that the Defendants have no interest in the '937 Patent and that they have been infringing the Plaintiffs' Patent, the issues are irrelevant and need not be answered.

## XVII. G. LICENCE AGREEMENTS

[360] The Defendants have challenged the validity of the licence and sub-licence between the Plaintiffs and, if valid, alleged that they are not effective in respect of the Weatherford Plaintiffs during the time that the Grenke Plaintiffs and Weatherford Plaintiffs were disputing the existence and terms of the sub-licence.

[361] Grenke exclusively licensed the '937 Patent to GrenCo Industries Limited in December 1992. At the time of the grant of the '937 Patent, December 22, 1998, when the licensed rights became enforceable, Grenke was listed as and has been found by this Court, to be the sole owner of the '937 Patent.

[362] The Defendants' basis for the challenge to the licence between Grenke and GrenCo is that Britton is the inventor/true owner of the '937 Patent or Britton and/or Engelen and Mrs. Torfs are co-owners. Since the Defendants' factual underpinning is not supported, the challenge to the licence falls.

[363] The Defendants raised a few technical points as to the form of the licence suggesting that these flaws render the licence void. The complete answer to these so-called flaws is well set out in *Apotex Inc. v. Wellcome Foundation Ltd.* (2000), 10 C.P.R. 4th 65 at para. 99 (F.C.A.):

> It is difficult to conceive of what more is necessary to prove the existence of a licence than to have the licensor and licensee both attesting to the validity of the licence.

[364] That is the situation as well in this present case – GrenCo is validly licensed.

[365] The first sub-licence was from GrenCo to Weatherford PC Pump effective February 11, 2000. Wes Grenke admitted that "Weatherford" had always been licensed since February 11, 2000.

[366] As a result of corporate reorganization within the Weatherford Group and the creation of Weatherford Canada Partnership, in January-February 2001, a new sub-licence was requested for the new entity.

[367] There then followed a protracted period of negotiation, dispute, termination and counter-termination while the parties settled out the terms of the new sub-licence. As part of this negotiation-dispute, Weatherford paid royalties owed to GrenCo in trust.

[368] Finally, in August 2004, GrenCo and Weatherford Canada parties signed a new sub-licence agreement effective February 1, 2001 and the accumulated royalties with interest were paid from trust to GrenCo.

[369] Against this background, the Defendants challenge the right of the Weatherford Plaintiffs to bring this action, claim the 2004 sub-licence void because GrenCo had no rights to sub-licence and in any event the Weatherford Plaintiffs are not entitled to damages because (i) the sub-licence was backdated or (ii) for a period of time, royalties were not paid or (iii) for a period of time GrenCo took the position that the sub-licence was terminated.

[370] The Weatherford Plaintiffs' standing to bring this action stems from its position as a person claiming under the '937 Patent because it had the right to use the '937 Patent. The rights of GrenCo as a licensee have been confirmed in this judgment. The right to claim under a patent has been

confirmed in *Signalisation de Montréal Inc. v. Services de Béton Universels Ltée* (1992), 46 C.P.R. (3d) 199 (F.C.A.).

[371] The Defendants' assertion that the 2004 sub-licence is void because GrenCo did not have a valid licence has no substance in view of the Court's finding as to the validity of the Grenke-GrenCo licence.

[372] The Defendants' reliance on *Union Carbide Canada Ltd. v. Trans-Canadian Feeds Ltd.*, [1966] Ex. C.R. 884 is misplaced. The case is distinguishable on its facts both as to the right to assign "choses in action" and the specificity of the grant.

[373] In the case at bar, the sub-licence was simply the right to use the patent; it was clear as to those rights. The Weatherford Plaintiffs' rights in this action arise not from an assignment of a chose-in-action but from its right to use – its "claiming under" the patent.

[374] As confirmed by the Court of Appeal in *Eli Lilly & Co. v. Novopharm Ltd.* (2000), 10 C.P.R. (4$^{th}$) 10, retroactive amendments to licensing arrangements are valid. There is no reason why the retroactivity of the sub-licensing between GrenCo and Weatherford Partnership should be an impediment to a claim for damages or in some manner alleviate the Defendants' liability for infringement.

[375] Likewise, the fact that royalties were paid in trust pending finalization of the sub-licensing terms and were ultimately paid out constitutes consideration for the sub-license. It does not lie to the Defendants to complain about the arrangement and seek to diminish its liability or quantum of damages arising from infringement. There was in fact payment of royalties and therefore the ratio in *Bayer Aktiengesellschaft v. Apotex Inc.* (1998), 82 C.P.R. (3d) 526 (Ont. C.A.) where there were no payments has no application here.

[376] With respect to the period of time that GrenCo claimed the sub-licence was terminated, the Defendants are not in any position to seek shelter under this legal posturing. There was neither acceptance nor a determination that the purported termination occurred. Indeed the Weatherford Plaintiffs continued to sell product and make royalty payments. In any event, GrenCo accepted the moneys paid in trust and owed over the period of alleged termination and accepted the retroactive sub-licence and payment.

[377] Therefore, the Defendants remain liable to the Weatherford Plaintiffs during all periods covered by the sub-licence agreements.

## XVIII. CONCLUSION

[378] For all these reasons, the Plaintiffs are entitled to judgment and the Defendants' Defence and its Counterclaim are dismissed.

[379] The Plaintiffs are entitled to:

(a) a declaration that Canadian Patent No. 2,095,937 and in particular claims 1, 6, 9, 11 and 14-17 are valid and have been infringed by the Defendants jointly and severally.

(b) a permanent injunction restraining the Defendants and anyone claiming under them, their officers, directors, employees, agents, servants, successors and assigns and any entity exercising control under them from:

(i) infringing the said Patent;

(ii) making, selling or inducing the sale in Canada of a sealing assembly or a rotary oilwell pump drive system containing a sealing assembly in infringement of any one of claims 1, 6, 9, 11 and 14-17 of the Patent; the specifics of the injunction to be more fully set out in the Judgment Order;

(iii) an Order for “delivering up” as set out in the Judgment Order;

(iv) damages to be assessed by the Court at a later date including all claims for exemplary or punitive damages, pre and post-judgment interest as of the date hereof; and

(v) their respective costs in this matter to be determined by the Court.

[380] A more precise formal order will issue. The matter of quantum of damages will be dealt with in a separate proceeding.

"Michael L. Phelan"

Judge

Ottawa, Ontario
June 3, 2010

ANNEX A

1. For use with a rotary pump for oil wells in which an elongate rod supports and rotates the rotor of a down-hole pump, an assembly for restraining oil leakage, comprising:

-- a stationary first member defining a through-bore for the rod and further defining a substantially cylindrical recess coaxial with said bore, the cylindrical recess being defined by a cylindrical wall, the first member having an external wall,

-- a rotary second member also defining a through-bore, the rod extending through the through-bore of the second member and rotating therewith, the second member having a substantially cylindrical portion received coaxially in said recess, the cylindrical portion being defined by an outer cylindrical surface which has a smaller diameter than the recess so as to leave an annular space between them, the annular space having an upstream end where oil under pressure seeks to enter the space, and a downstream end opposite the upstream end,

-- a plurality of annular seal cartridges stacked within said annular space, each cartridge having, in axial section:

a) a dynamic seal slidably contacting said cylindrical portion,

b) a first open space downstream of the dynamic seal and adjacent the cylindrical portion, and a second open space adjacent the cylindrical wall, and

c) passageway means through which the two spaces are in communication,

-- for each seal cartridge a leak passage through the first member, the leak passage communicating the respective open spaces with said external wall, and

-- plug means for closing at least one of the passages.

2. The assembly claimed in claim 1, in which each seal cartridge further has:

d) an inwardly open groove downstream of the first open space and

e) a resilient ring in said groove, the resilient ring being adapted to be compressed by the freezing and expansion of any water within the open spaces and

passageway means of the seal cartridge.

3. The assembly claimed in claim 2, in which each seal cartridge further has:

f) a support surface substantially parallel with said outer cylindrical surface, located downstream of said groove, and

g) an O-ring seal element which is U-shaped in radial section, including two arms of which one is adapted to lie against said outer cylindrical surface, and of which the other is adapted to lie against said support surface, such that the interior of the U-shape is open toward said first open space, the O-ring seal element further having an outwardly projecting integral flange lying in a flange recess in the respective seal cartridge, such that the flange is compressed and gripped between the respective cartridge and the next adjacent cartridge.

6. The assembly claimed in claim 1, in which the annular space defined between said cylindrical wall and said cylindrical surface is closed by an annular wall at its upstream end, each seal cartridge further having an outer peripheral recess adjacent the cylindrical wall of the first member, and an O-ring seal compressed within said peripheral recess.

7. The assembly claimed in claim 3, in which the annular space defined between said cylindrical wall and said cylindrical surface is closed by an annular wall at its upstream end, each seal cartridge further having an outer peripheral recess adjacent the cylindrical wall of the first member, and an O-ring seal compressed within said peripheral recess, and lock means urging said annular seal cartridges against said annular wall.

8. The assembly claimed in claim 7, in which the lock means includes at least one annular member located downstream of the annular seal cartridges, and, immediately downstream of the annular member, a circlip lodged in a groove in the cylindrical wall.

9. The assembly claimed in claim 1, in which the rotary second member includes a packing portion defining an annular cavity surrounding the rod and closed at both ends, and a plurality of packing elements compressed within said annular cavity.

10. The assembly claimed in claim 3, in which the rotary second member includes a packing portion defining an annular cavity surrounding the rod and closed at both ends, and a plurality of packing elements compressed within said annular cavity.

11. The assembly claimed in claim 6, in which the rotary second member includes a packing portion defining an annular cavity surrounding the rod and closed at both ends, and a plurality of packing elements compressed within said annular cavity.

12. The assembly claimed in claim 7, in which the rotary second member includes a packing portion defining an annular cavity surrounding the rod and closed at both ends, and a plurality of packing elements compressed within said annular cavity.

13. The assembly claimed in claim 9, in which the packing portion is threadably connected to said cylindrical portion of the second member.

14. The assembly claimed in claim 1, in which the said assembly further includes a stationary framework to which said first member is secured, the framework including thrust and radial bearing means supporting the second member for rotation.

15. The assembly claimed in claim 1, to which the assembly further includes drive means connected to the second member for receiving drive torque, and connection means allowing the rod to be both supported and rotated by said second member.

16. The assembly claimed in claim 9, in which the said assembly further includes a stationary framework to which said first member is secured, the framework including thrust and radial bearing means supporting the second member for rotation, drive means connected to the second member for receiving drive torque, and connection means allowing the rod to be both supported and rotated by said second member.

17. A method for restraining oil leakage in a pump for oil wells in which an elongate rod supports and rotates the rotor of a down-hole pump, utilizing an assembly including a stationary first member defining a through bore for the rod and further defining a substantially cylindrical recess coaxial with said bore, the cylindrical recess being defined by a cylindrical wall, the first member having an external wall, a rotary second member also defining a through-bore, the rod extending through the through-bore of the second member and rotating therewith, the second member having a substantially cylindrical portion received coaxially in said recess, the cylindrical portion being defined by an outer cylindrical surface with a smaller diameter than the recess so as to leave an annular space between them, the annular space having an upstream end where oil under pressure seeks to enter the space, and a downstream end opposite the upstream end; said method comprising the steps:

a) providing a plurality of stacked annular seal cartridges within said annular space, each cartridge having, in axial section: a dynamic seal in sliding contact with said cylindrical portion, a first open space downstream of said dynamic seal and adjacent the cylindrical portion, a second open space adjacent the cylindrical wall, and passageway means through which the two spaces are in communication,

b) providing, for each seal cartridge, a leak passage through the first member, each leak passage communicating the respective open spaces with said external wall,

c) injecting a lubricant through the leak passage of the furthest upstream seal cartridge and then plugging that leak passage, while leaving open the leak passage of a seal cartridge downstream of the furthest upstream cartridge,

d) monitoring the left-open leak passage for leaking oil, and

e) when such leaking oil is detected, shutting down the pump and replacing at least those seal cartridges past which oil has leaked.

FEDERAL COURT

SOLICITORS OF RECORD

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| DOCKET: | T-1236-01 |
| STYLE OF CAUSE: | WEATHERFORD CANADA LTD., WEATHERFORD CANADA PARTNERSHIP, EDWARD GRENKE and GRENCO INDUSTRIES LTD.<br><br>and<br><br>CORLAC INC., NATIONAL-OILWELL CANADA LTD. and NATIONAL OILWELL INCORPORATED |
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| REASONS FOR JUDGMENT: | Phelan J. |
| DATED: | June 3, 2010 |

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