

**IN THE DUST DISEASES TRIBUNAL  
OF NEW SOUTH WALES**

DDT NO. 8248 of 2008

**JOHN FREDERICK WATCHORN**  
Plaintiff

**THE STATE OF NEW SOUTH WALES**  
First Defendant

**POWER TECHNOLOGIES PTY LTD**  
Second Defendant

**AWI HOLDINGS PTY LTD**  
Third Defendant

**CONTRIBUTIONS ASSESSMENT  
DETERMINATION**

In this matter I have been appointed by the Registrar of the Dust Diseases Tribunal pursuant to clause 49(1) of the *Dust Diseases Tribunal Regulations 2007* ("the Regulations").

The plaintiff, as I shall call Mr Watchorn, has brought a claim for provisional damages pursuant to section 11A of the *Dust Diseases Tribunal Act* against the three defendants. For the purposes of this determination I have to accept that the above three defendants have a liability on the assumption that the plaintiff was exposed to asbestos and welding fumes in the course of his employment. The relevant periods of exposure claimed in the statement of claim were a period of five years between 1947 and 1952 when the plaintiff was employed by the State Rail Authority as an apprentice boilermaker at the Thirroul running

sheds, Eveleigh workshops and Chullora workshops where he undertook both work involving exposure to asbestos materials and also welding fumes.

He further alleges between 1957 and 1961 he was employed by the second defendant as a welder/boilermaker at the Tallawarra Power Station. That defendant is elsewhere referred to as International Combustion Australia Ltd, as it was then known.

Between 1963 and 29 June 1971 the plaintiff was employed by the third defendant as a boilermaker/welder in pipe fabrication and erection at major industries in Port Kembla. That employment is elsewhere referred to in the papers and Stewarts and Lloyds.

At p10 of the statement of particulars there is a summary of work and exposure history of the plaintiff which I reproduce at p3.

In parts it is inconsistent with some of the plaintiff's other details of exposure history as it sets out both compensable and non-compensable employments in readily available format. It discloses that the plaintiff from July 1971 to 1973 worked for Tubemakers at Port Kembla where he was exposed to asbestos. It does also suggest, contrary to what appears later at paragraph 4.7, that between 1974 and 1988 for some period he was exposed to asbestos whilst working as a welder/supervisor for Henfa Welding. He also suggests that there was a period in 1961 to 1963 when he was exposed to asbestos while working on the Water Board.

<b>Start date</b>	<b>End date</b>	<b>Name and address of employer (including any other names by which the employer may have been known)</b>	<b>Employer's industry</b>	<b>Occupation, a brief description of duties and status (eg full-time, part-time, casual etc)</b>	<b>Exposed to asbestos ?</b>
1945	1945	Local butcher – Wollongong	Meat industry	Assistant with customer services and cleaning duties	No
1946	1946	Electrolytic Refining and Smelting Company – Port Kembla	Electrolytic refining and Smelting	Labourer	No
1947	1952	NSW Government railways – Thirroul, Eveligh and Chullora	Railways	Apprentice boilermaker (full-time)	Yes
1952	1957	Australian Iron and Steel – Port Kembla	Steelworks	Boilermaker (full-time)	Yes
1957	1961	International Combustion Australia Limited (Tallawarra Power Station)	Power generation	Welder/boilermaker (full-time)	Yes
1961	1963	Metropolitan water, Sewerage and Drainage Board – Wollongong	Water	Welder (full-time)	Yes
1964	June 1971	Stewarts and Lloyds – Port Kembla	Tube manufacturer	Boilermaker/welder (full-time)	Yes
July 1971	1973	Tubemakers - Port Kembla	Tube manufacturer	Boilermaker/welder (full-time)	Yes
1974	1988	Henfa Welding – Port Kembla	Welding	Welder/supervisor (full-time)	Yes
1989	1995	Gelman Sciences – Port Kembla	Manufacturer of safety equipment	Supervisor (full-time)	No

The plaintiff gave a very detailed exposure history at paragraph 4.1 being from pp11 to 14 of his particulars setting out details of his asbestos exposure and welding exposure at the SRA. I reproduce those pages.

*"I started an apprenticeship with the NSW Government Railways at the age of fifteen in 1947. In [sic] worked at the Thirroul Running Sheds, for the first four years. During this time I was engaged in regular boiler inspections. When the inspections were carried out I was required to remove a metal cover from the boiler crown, which exposed an area of approximately eight feet by four feet covered by asbestos insulation to a depth of two inches. The asbestos insulation had to be scraped off and bagged so that the crown bolts in the boiler could be inspected. The asbestos insulation I scraped off was in the form of loose brittle fibres, a bit like the texture of cotton wool.*

*A labourer and I carried out this asbestos removal. The asbestos was removed from the boiler by a "scraper", which was a fairly simple object that looked a bit like a metal garden fork, with a short handle. The crown bolts were several inches apart and the tool needed to be able to scrape in between each of these bolts. The tool was about four inches long so that it could fit in between the bolts. After using the scraper, we used a wire brush to remove the remnants of the asbestos, which created a lot of visible asbestos dust and fibre to fill the air around us, and I inhaled it.*

*One of us scraped the asbestos material while the other held a hessian bag to put it into. I usually held the bag. It was a very dusty process as dust was scooped up in handfuls. Dust was clearly visible in the air constantly and we breathed it in. The asbestos was a fibrous type of material. When we grabbed the material in handfuls it stuck together.*

*Once the asbestos had been removed the inspector looked at the head bolts on the boiler to see whether any were leaking, and if so they required repair. Usually they required nothing more than tightening. On completion of the inspection and any repairs, the asbestos was removed from the hessian bag and spread back over the boiler. This was done by hand. We packed the asbestos tightly by patting it down with our hands and jumping up and down*

*on it. This caused visible dust to be released in to the air, which I inhaled. We put a retaining strip around the top of the boiler to hold the asbestos in place, and then bolted the metal covers back into place.*

*The bagging process was an extremely dusty and dirty process. The operation was done dry - no water was used to keep the dust down. Our clothes were so dusty that we had to shake them out to get rid a f the dust. We didn't take our clothes home. We set up a system whereby we put a bucket under a locomotive engine, attached a hose to the steam engine and steam-cleaned our clothes. This ways a good way of cleaning our clothes without having to take the dusty garments home. I had a shower before leaving work because I was so dusty.*

*I performed this asbestos removal work, for boiler inspections about once a month, and each time it took about a day. The apprentice was always the one that did the bagging with the labourer so I did it on a regular basis during the four years I was at Thirroul.*

*We wore no gloves, masks or protective clothing of any type other than our usual combination overalls while doing this task. We were never asked to wear any protective equipment, and were not told of the dangers associated with working with asbestos.*

*I also worked on maintaining the locomotives. We re-tubed them and did whatever was necessary to keep them going. I worked on the firebox and smoke box units in the steam trains at Thirroul. This involved re-tubing the boilers and carrying out caulking of seams to make the firebox water and'ortight I also drilled test holes to remove ash embedded in the fireboxes, which was a very dusty job.*

*There were about 30 locomotives in the shed at any one time. Four or five of these had asbestos work being performed at a time. I worked on one locomotive at a time. Two labourers and I performed work on all these locomotives. One locomotive took approximately one month. We spent about half a day stripping the dry asbestos from the locomotive so that we could inspect and repair it. We scraped the asbestos off using hand tools similar to those we used when we removed asbestos from the boilers for inspections, and finished off using a wire brush. This released a lot of visible dust into the air, which we breathed in. Once the asbestos was removed, the boiler was repaired and re-insulated with the asbestos we had scraped off - we did not use new asbestos. We packed*

*the dry asbestos by hand or by walking it in so that it packed tightly. This caused a lot of visible dust to fill the air and I inhaled it.*

*I don't know who supplied the asbestos to the government railways. The asbestos was a grey looking, dirty material. It was probably grey because coal dust, from the steam engines was mixed with it - dust got in underneath the metal sheet and the coal mixed with it.*

*I spent my final year as an apprentice at Eveleigh and Chullora. When we did boiler inspections at Eveleigh and Chullora the locomotives came in and were completely dismantled, usually in a different part of the shop to where I was working, so the removal and bagging process that I have just described was done by other people. When the locomotives arrived at the part of the Eveleigh or Chullora workshops that I was working in, they were relatively clean although I couldn't say that they were totally free of asbestos.*

*At Chullora I worked in the new locomotive section which designed and made the 38 Class. I also worked in the boiler repair section in the Running sheds for about three months where I maintained 38 Class locomotives prior to them going out on service. I changed certain components but I do not believe I was exposed to asbestos in this work*

*The main types of welding I did during my apprenticeship were oxy-acetylene welding and electric welding. We did oxy welding on the copperplate boilers where they had corroded to an unsafe thickness. At the Eveleigh workshops we cut the boilerplates and replaced them with new material every three weeks, on average. We did the copper welding in situ, in the boiler. The boiler was turned on its side and we worked through an opening of about 1200mm x 2400mm with a depth into the box of about 2400mm. Another worker used a large heating torch and I used a welding torch to apply the flux and copper, filler rod. We did this work without a mask or any fume extraction. The copper welding was a one off job which we did to extend the working life of the boiler. It probably took about 35 to 40 hours.*

*We did electric welding for three months continuously at the Chullora workshop in a welding bay. It was mostly mild steel parts which we newly fabricated or repaired. We carried out this welding at Chullora in an enclosure which was about 3 x 3 metres, being the sides of the building, and the other two sides were about 2.5 metres tall and had*

*a steel table, 1200 mm sq and about 600mm to 800mm high. The overhead crane lo we-red the work onto the table and I welded it off.*

*There were 2 or 3 bays where we were working doing the welding, but most of the welding ,fumes I inhaled were from my own work I was never warned of any dangers relating to fumes or smoke and the welding rod packaging carried no warnings at all. The box information only gave the maker's name, product numbers, rod size and number of amps to run the rod , I would describe the intensity of this welding to be medium to high. The smaller jobs were better because the smoke dissipated more quickly. The larger jobs were worse because the, fumes became trapped and after a few hours I had to go and get water to Booth my throat and airways.*

*The fluxes I applied while welding were very strong and at the end of a welding session my throat was dry and sore, and my taste was effected for an hour or so afterwards. I also felt a tightness in my chest. We worked 8 hour shifts, 5 shifts a week. I finished work for the NSW Government Railways in 1952.”*

At p22 of his particulars he sets out again an extensive history of his exposure at International Combustion Australia Ltd, the second defendant. I reproduce that industrial history.

*“In 1957 I obtained a job with International Combustion Australia Limited, working at Tallawarra Power Station. I worked mainly on steel erection. I was also being trained in welding boiler tubes and pipes.*

*The power station had six units or boilers, four of which had already been constructed by the time I arrived at the power station. The other two were being constructed and it was on the construction of those last two units that I worked*

*Each unit consisted of a large steam drum which had four x twelve inch and one x fifteen inch pipes coming down from it These pipes carne down, from the bailer drum to the side wall headers, a distance of about 100 feet I welded the joints of these pipes. I did electric arc welding for this job. The flux we used was Rutile and we used one type of electrode which was a steel core rod, although the gauges o f the electrode varied*

*The joints were wrapped in about one inch diameter copper wire, which was coated with asbestos cloth. The asbestos cloth came in a coil. The electricians did the wrapping and then the pipe was induction heated. We checked the temperature with a thermal crayon, and when it was hot enough, the power was turned off and the cable was left on. There was then sufficient space between the cable coils to do the welding work Effectively I was doing welding work right up against an asbestos covered cable.*

*Sometimes the electricians altered the coiling above us, and when they did this, the asbestos dust rained down on us. When the riggers took the staging down, we were often working below them, and as they disassembled the staging, asbestos dust rained down on to us.*

*We handled the asbestos with our hands and did not wear gloves. The work was very dusty. Every time we moved the coils of asbestos, visible dust was released into the air and we breathed it in. By the time we had finished each day of work we were completely covered in a white type of dust which was shaken off the pipes during the welding process.*

*We worked twelve hour days doing this work. Two boilermakers worked on each joint, welding half a pipe each. Each job took about N days, days We started at the top of each of these pipes and worked our way down. The joint, once welded, was stripped of the heating coil, and then it was reapplied to the weld area to re-heal and stress relief or "normalise "the joint. A pale coloured smoke rose and eddied around us during this work*

*Units 5 and 6 were much bigger than Units 1 to 4, and needed to be able to tolerate pressure of up to 1100 degrees. Hence they needed more insulation. Lagging work was performed in my immediate vicinity. As soon as I finished one section of work the ladders immediately began lagging it. We were often working shoulder-to-shoulder. There were often ladders working overhead, lagging or re-lagging, and a constant stream of asbestos dust rained down on us.*

*The asbestos came in pre formed blocks. They came in a certain size, for a particular sized pipe. Workers around me shaped and cut the asbestos with a saw, which released a lot of dust into the air. I did not undertake this work myself but I worked shoulder-to-shoulder with people that did, and inhaled that dust*

*We also worked on six inch and eight inch pipes coming from the side wall headers to the boiler, and we used propane heating torches to heat the pipes to weld temperature. About every 20 feet there was a row of pipes, so 2 to 3 of us worked on the tube welding.*

*We used what we called asbestos cloth to wrap joints upon completion. We also undertook stress relieving of the joints. While the stress relieving was going on we wrapped the joints in asbestos cloth and let it cool down slowly. While wrapping the joints in the cloth the asbestos did not completely stay together so a fine white dust was released into the surrounding air, and it covered our overalls, skin and hair.*

*I recall seeing ladders mixing powdered asbestos with water into a paste. They cut up asbestos blocks with a saw and applied it to pipes. Both these processes were extremely dusty. This work was always being performed above me.*

*The types of asbestos I remember working with at Tallawarra include asbestos rope, asbestos tape, asbestos blanket material, asbestos packing, asbestos gaskets, asbestos Klingerite sheets, asbestos pre-moulded pipe sections, asbestos lagging on copper wire, pipes and boilers, and bagged asbestos.*

*We wore no masks or any protective clothing of any type whatsoever apart from a welding mask to protect our eyes and a welding gauntlet to prevent your hands from getting burnt during the welding process.*

*The area we worked in was not well ventilated. Tarpaulins were erected to stop the wind from interfering with the welding equipment. Therefore there was not any draught of air. There were stages above and below us, so we were quite closed in.*

*Each day I got changed at the power station into my overalls. My overalls were constantly dusty and sometimes smelt smoky from the welding fumes. At the end of each day I changed out of my overalls, and every two days or thereabouts I took my overalls home and my wife washed them. She took my overalls and work gear out on to our back landing to beat the clothes against the wall to get rid of the dust, and then she washed them in the washing machine.*

*During the entire period of my employment at the power station I was continually exposed to asbestos and welding smoke and fumes.”*

At p31 of the particulars he reproduces an exposure history at paragraph 4.1 of his work for the third defendant which he refers to as Stewart and Lloyds and at p35 paragraph 4.1 he sets out his exposure at Tubemakers between 1971 and 1973.

At paragraph 4.7 on p36 the plaintiff estimates as a percentage the proportion that each period of exposure constitutes his total exposure. His best estimate is as follows:

*“NSW Government Railways – 15% of my overall exposure to asbestos*

*Australian Iron and Steel Pty Ltd – 8% of my overall exposure to welding fumes (no exposure to asbestos)*

*International Combustion Australia Limited – 35% of my overall exposure to asbestos; 25% of my total exposure to welding fumes*

*Metropolitan Water, Sewerage and Drainage Board – 8% of my total exposure to welding fumes (no exposure to asbestos)*

*Stewarts and Lloyds – 18% of my total exposure to asbestos; 18% of my total exposure to welding fumes*

*Tubemakers – 32% of my overall exposure to asbestos; 22% of my total exposure to welding fumes*

*Henfa Welding – 12% of my total exposure to welding fumes (no exposure to asbestos)”*

At paragraph 6.3 on 47 of particulars to further complicate matters the plaintiff asserts:

*“I made a claim in relation to my welding fumes related disease and it settled as against BHP Steel (AIS) Pty Limited (formerly known as Australian Iron & Steel Pty Limited), Henfa Welding Pty Limited, Sydney Water and*

*Tubemakers of Australia Limited on 13 March 2002. I received \$9,100.00 as a result of that claim.”*

A copy of a common law release was appended to the third defendant's reply in short minutes of order in Compensation Court Matter No 1453 of 2000 making reference to settlements of claims for \$500 excluding asbestos-related diseases.

I note from the medical evidence that has been appended to the various replies that there is a substantial disagreement between the experts concerning the precise aetiology of the plaintiff's lung condition and a substantial disagreement as to whether or not his lung conditions including pneumonia, bronchitis, shortness of breath, pulmonary thickening and emphysema are caused by industrial exposures to asbestos and/or welding. Fortunately I do not have to make that determination.

There seems little dispute that the plaintiff is severely disabled by virtue of his condition.

All of the defendants are Category 2 defendants.

Because of the complexity and length of the respiratory problems suffered by the plaintiff there is a considerable diversity of opinion between various commentators including Professor Breslin who did not believe the plaintiff was disabled by occupational exposure. Other commentators felt that his occupational exposure was quite modest.

I have been assisted in the difficult task of attribution of responsibility in this matter by the analysis by Professor McKenzie whose report of 5 December 2000 is in the following terms:

*“The situation is very complex and I feel that he has several different respiratory problems, and that the bulk of his*

*respiratory impairment and disability is not related to occupational exposure. However, I accept that it is very likely that an intense exposure to welding fumes on repeated occasions did aggravate his respiratory symptoms and problems. I believe that all his periods of occupation between 1947 and 1988 contributed to his respiratory condition. I do not feel that his employment with Tubemakers was very different from that which he encountered in some of his other periods of employment. During his period there, he had a particularly bad episode of pneumonia, but I could not regard this as directly attributable to his occupational exposures. On balance, I would apportion liability simply on the basis of duration of employment. On this basis, Tubemakers would be responsible for 25% of the occupational exposure between 1947 and 1988. After 1988, his exposures were substantially decreased as he moved into a supervisory role.”*

Professor McKenzie’s earlier report of 20 July 2000 makes it clear that he is basing his analysis on an industrial history that the plaintiff worked for Tubemakers Australia between 1963 and 1973, that is the period of ten years, eight years of which he in fact worked for Stewarts and Lloyds. I do not know whether Tubemakers took over that concern but I will proceed on the assumption that most of the period if not all of the period that Professor McKenzie is referring to is the period covered by the third defendant.

If the plaintiff has an asbestos-related condition, and Dr Bryant describes him as suffering from diffuse pleural thickening, in my view it should be treated as a divisible condition.

Similarly, although there is scant medical material before me on this issue, I propose to regard the plaintiff’s exposure to welding fumes as also a divisible condition, namely “the culmination of a progression, the individual stages of which were each brought about by the separate acts of the persons sued” – see *Thompson v Smiths Ship Repairers Ltd* (1984) QB 405 at 440.

The plaintiff says, as set out above, that he had no asbestos exposure at the Water Board or whilst employed by Henfa.

It seems to me reading the plaintiff's industrial history that his exposure at the employments of the three nominated defendants in relation to asbestos dust exposure was significant. Similarly in particular at International Combustion Australia Ltd and Stewarts and Lloyd and Tubemakers, his exposure was also significant.

Under clause 8 to the notes to Schedule 1 of the DDT (Standard Presumptions) order of 2007 I have determined that there is approximately forty years of exposure to either asbestos and/or welding fumes between the plaintiff's commencement of employment at the State Rail Authority in 1947 and 1988 when he ceased working for Henfa Welding at Port Kembla.

Medical evidence suggests that if the plaintiff's incapacity is related to his industrial exposures it seems to me that welding is more likely to be a significant contributing factor than his asbestos exposure although his asbestos exposure was quite heavy. It has not been reflected in unambiguous medical signs.

Like Professor McKenzie, I propose to treat the commencing point for the determination of apportionment based on separate periods of exposure. However, I do not propose to treat them as completely equal in contribution to the disease, particularly regarding heavier exposures according to the plaintiff at the second and third defendants and Tubemakers and lesser exposure at Henfa. I am not satisfied that, in respect of the exposures occurring prior to 1961, any particular weighting should be applied to them. I am of the view that the plaintiff's last period of employment with Henfa Welding was of lesser potency, involving as it did no exposure to asbestos and only a lesser amount

of welding exposure. According to the plaintiff it was only in the last twelve months at Henfa that he did more welding work whilst in that employment.

Whilst the Henfa employment was for a period of fourteen years, based on the plaintiff's analysis it had only a very modest part to play in the development of any disorder based on welding and no part to play based on exposure to asbestos. Rather than accept a strictly temporal analysis in what is at best an imprecise exercise, I have decided that, having regard to the plaintiff's analysis of his industrial exposure at paragraph 4.7 of his particulars and Professor McKenzie's views, some weighting is necessary to reflect the plaintiff's views about the heavier exposure at both the second defendant, the third defendant and the Tubemakers exposures.

I am of the view that the plaintiff's claim should be treated as based on a 40 year industrial history and should be apportioned as follows:

First Defendant (SRA) – 5 years (1947 to 1952)		12.5%
Australian Iron and Steel – 5 years	(Not compensable)	12.5%
Second Defendant – 4 years (1957 to 1961)		15%
Metropolitan Water Board (1961 to 1963)	Non compensable	5%
Stewarts & Lloyds – 8 years (1963 to 1971)		30%
Tubemakers (1971 to 1973)	Non compensable	7.5%
Henfa (1974 to 1988)	Non compensable	17.5%
<b>TOTAL</b>		100.00%

I have assumed that the Henfa period of 14 years is half the potency, that is 7/40ths rather than 14/40ths, and I have divided the 17.5% that would otherwise on a temporal basis be attributed to Henfa pro rata between the second defendant, adding an additional 5% to what would otherwise have been 10% of liability. I have added 10% to Stewart & Lloyds on the same basis and 2.5% to Tubemakers.

1. I appoint the third defendant by its proper officer as the Single Claims Manager for the claim.
2. I have forwarded to it my memorandum of fees.

Dated the 7th day of May 2009

**PAUL BLACKET SC**  
CONTRIBUTIONS ASSESSOR.

A handwritten signature in black ink, appearing to read "Paul Blackett", followed by a period. The signature is written in a cursive, flowing style.