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IN THE HIGH COURT OF AUSTRALIA

THE COMMONWEALTH OF AUSTRALIA

V.

J. & A. BROWN AND ABERMAIN SEAHAM COLLIERIES LTD.

REASONS FOR JUDGMENT

Judgment delivered at SYDNEY

on WEDNESDAY, 15th June, 1949.

H. E. Daw, Gov. Print., Melb.

THE COMMONWEALTH OF AUSTRALIA

V.

J. & A. BROWN AND ABERMAIN SEAHAM COLLIERIES LTD.

JUDGMENT

WILLIAMS J.

THE COMMONWEALTH OF AUSTRALIA

v.

J. & A. BROWN AND ABERMAIN SEAHAM COLLIERIES LTD.

JUDGMENT WILLIAMS J.

The origin of this action was an accident which occurred in the course of the coaling of s.s. "Ardent" by s.s. "Stockrington" on Monday, 15th April 1946. When the two ships were alongside each other the grab of the s.s. "Stockrington" filled with coal which was suspended above the deck of the s.s. "Ardent" suddenly fell from the chain to which it was attached on to the No. 3 winch of the s.s. "Ardent" completely smashing the winch and causing damage to her starboard lifeboat and deck and fittings. It is admitted that at the time of the accident the plaintiff was in possession of the "Ardent", that the "Stockrington" was one of the defendant's colliers, and that the "Ardent" was damaged to the extent of £490. 8. 3.

In the statement of claim the plaintiff alleged that the accident was caused by the defendant negligently failing to provide good and efficient equipment to carry out the coaling and that as a consequence of such negligence the grab carried away, fell and caused the damage complained of, or alternatively that the defendant was negligent in the care, control and management of the grab and that as a consequence of such negligence the grab carried away, fell and caused the damage complained of. But at the hearing the plaintiff confined its claim to the first head of negligence. In the statement of defence the defendant pleaded that the damage arose from inevitable accident, the breaking of the chain to which the grab was attached being due to a defect in the chain which was not known to the defendant and could not have been known to the defendant by the exercise of due care and diligence.

The case was contested, rightly I think, on the basis that the breaking of the chain was prima facie evidence that the accident was caused by the negligence complained of and that the onus was on the defendant to prove the defence of inevitable accident. An accident is inevitable where no ordinary care, caution and skill could have prevented it. A defendant who relies on such a defence must prove what was the cause of the accident and that the result of that cause was inevitable. The Marpesia L.R. 4 P.C. 212 at pp. 220, 221; The Merchant Prince 1892 P. 179 at pp. 189, 190; Fawkes v. Poulson 8 T.L.R. 725.

I accept the evidence of the defendants that the length of chain attached to the grab of the "Stockrington" was 50 feet, that this chain together with another chain of the same length was delivered to the "Stockrington" at Newcastle on the Saturday before the accident and that these chains were parts of four chains described as ¾" diameter BBB short link chains each 60 fathoms in length purchased by the defendant from Barzillai Hingley & Sons, Cradley Heath, Staffordshire, England, in July 1942 and stored in the defendant's store at Hexham. Before being placed on board the two chains were inspected by the defendant's foreman blacksmith link by link to see if they contained any defects including any faulty welds and passed by him as free from any defects. The "Stockrington" then proceeded from Newcastle to Sydney and during the voyage one of these chains was roven into the grab by the boatswain, the captain being present from time to time. On reaching Sydney the "Stockrington" first used the grab to discharge coal on to the No. 1 jetty Darling Harbour for about 8 hours on Sunday night and then on Monday morning was moved alongside the "Ardent" and was in the process of bunkering the "Ardent" when the accident occurred.

The grab fell because one link in the chain broke at the weld. The chain comprised about 300 links made of wrought iron. The link of such a chain starts as a rod which is heated to the

required temperature, bent by hammers or forced round by jigs until the two bevels are brought into position. The metal is then raised by blow torch or furnace to the proper temperature and the bevels are hammered together, that is welded by pressure. When such a chain has been in service for a considerable time it tends to become surface hardened and brittle and liable to crack unless it is reconditioned by annealing. The faulty link in the chain which caused the accident on the "Ardent" was preserved and examined on behalf of the defendant by Professor Eastaugh, Emeritus Professor of Engineering and Technology at the University of Sydney who, in addition to his general knowledge and experience, has had particular experience in welding as the Comptroller of Research for Commonwealth Industrial Gases. It was also examined on behalf of the plaintiff by Mr. C. W. Orr Metallurgist /in charge of the Defence Research Laboratories, Lidcombe, who had a distinguished university career in metallurgical engineering. Professor Eastaugh was of opinion that the fault in the link was due to a defective weld. He said that the simplest cause of such a defect would be that the metal was not hot enough for welding. Then there would not be adhesion under the impact of the hammer and you could get what looked like a good weld but which was not. He said that wrought iron consists of alternate layers or streaks of very pure iron and slag and that the recognised good welding properties of wrought iron are due to the presence of this slag which acts as an ever present flux. When the wrought iron is hot enough the slag runs away leaving clean metals that will stick to one another. If by chance there is an excess amount of slag or if the hammering is not done correctly or the wrought iron is not hot enough clean metal surfaces are not obtained and it is not a proper weld. The external surface is that of a good weld but there may be an internal defect which cannot be seen. Professor Eastaugh was of opinion that this is what had happened in the present case.

Mr. Orr, on the other hand, after subjecting a slice of the metal cut from the link immediately beyond the inner end of the break to hardness tests from the surface to a depth of 10 mm. was of opinion that these tests showed that the link had serious surface hardening approaching somewhere near the maximum hardening of wrought iron such as would only occur in a chain which had been used for a considerable period. He was of opinion that the link at its apex showed definite deformation caused by inter link action such as would occur in such a chain. After making a micro examination and photographing the transverse section of the link from which the slice had been removed he found that there was a crack running down and following approximately along the line of the weld and towards the end of the crack running away from this line into the parent metal. He said that the weld under the microscope appeared to be of good average quality free from excessive slag or oxide inclusions along its face. He was of opinion that there had been two fractures, an initial crack in the face of the weld which could have been associated either with a defective weld or work hardening but was more probably due to such hardening and later a tearing away of the whole of the metal. Professor Eastaugh thought that the crack shown in the photograph was merely a continuation of the break where the parts that had been attempted to be welded had been torn apart. He said that he had not subjected any part of the link to hardness tests because he had been told that it was a new link but that he could not see any signs of wear or other indications that the chain was not a new chain. He said that the hardness tests to which Mr. Orr subjected the slice cut from the link were certainly indicative of the link being an old and not a new link, but that tests at one particular point were not a sufficient guide to its age and that it was necessary to compare the figures with the progressive changing hardness from the centre to the outside of what was indubitably a new link before they could become decisive.

As I said during the addresses, expert evidence is very valuable and helpful to the Court, but it must be weighed together with the evidence of the witnesses who can give direct testimony of the relevant facts. In this case there is the evidence of a number of witnesses that two new chains each of 50 feet were delivered to the "Stockrington" to be used on the grab immediately before the accident took place. There is the unequivocal testimony of the captain and boatswain of the ship that one of these new chains was roven into the grab on the voyage to Sydney and was in use on the grab when the accident occurred. Counsel for the plaintiff did not attack the honesty of these witnesses. He pointed out that the accident had occurred three years ago and submitted that in view of Mr. Orr's evidence they must be mistaken in saying that a new chain was then in use. But I do not think that the recollections of the captain, boatswain and other witnesses called by the defendant has failed them. I accept them as honest and reliable witnesses and I am therefore satisfied that it was a new chain which was in use when the accident occurred. I make this finding more readily because an experienced and reliable expert witness like Professor Eastaugh maintained his opinion, after hearing Mr. Orr's evidence, that the link was a new link and that the break was due to a hidden defect in the weld. Mr. Orr was a fair and frank witness who had made a more complete examination of the link than Professor Eastaugh, but I think that I must accept the direct testimony that the link was a link in a chain which had only been in use for about 8 hours in preference to his opinion that the hardness of the surface of the link was due to long use. I think that this hardness must have been due to some other cause possibly to the use of old metal or to the defective heating of new metal in the course of making the link. Mr. Orr agreed with Professor Eastaugh that a fracture due to surface hardening would in the majority of cases be a fracture running across the metal. The link does I think as Mr. Orr said show some deformation due to

inter link action but it appears to me to be slight and capable of being attributed to the eight hours the link had been in use.

I find therefore that the cause of the accident was a defective weld in the link in evidence. I also find that the defect was a latent one that is to say a defect which is not discoverable by the exercise of reasonable care and skill, Pinnock Bros. v. Lewis and Peat Ltd. 1923 1 K.B. 690 at p. 697.

Mr. Manning however contended that the defendant had not exercised ordinary care, caution and skill because it had not subjected the chain to a load test before it was brought into use. If this had been done it is by no means certain that the defect would then have been discovered because the link stood up to 8 hours work before it broke. But in my opinion the defendant was under no obligation to make such a test. The link was a part of chain lengths of high quality wrought iron purchased from a skilled and experienced maker of chains in England. The goods were accompanied by a certificate of the maker that they weighed 4 tons and had been tested to 6 tons 15 cwt. for proof strain applied by dead weight lever balance and that being subsequently examined they did not show any defect or permanent deformation. In my opinion the defendant was entitled to rely on this certificate and could not reasonably be expected to make a further test of this nature. Other portions of the same chain lengths had been in use on the "Stockrington" for over three years and had proved to be satisfactory. There was therefore no reason why the defendant should doubt the reliability of this certificate. The failure to make this test was not evidence of want of ordinary care, caution and skill, cf. Doward v. Lindsay L.R. 5 P.C. 338 at p. 344.

For these reasons I am satisfied that the damage was caused by an inevitable accident and that the action should be dismissed. No argument was addressed to me why costs should not as is usual at common law follow the event, Stanley v. Powell 1891 1 Q.B. 86 at p. 94, and I therefore give judgment for the defendant with costs.