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KENNETH THIBERT, OWNER OF THE DIESEL TUG DUSTY, vs. UNIONINSURANCE SOCIETY OF CANTON, LTD.

ARBITRATION AT SEATTLE, WASHINGTON

1951 AMC 1661

September 20, 1951

HEADNOTES:

MARINE INSURANCE - 156. Inchmaree Clause.

The breaking of a cam roller and pin which disabled and damaged a tug's diesel motor, held due to latent defect and covered by the Inchmaree Clause of the hull policy. The new and good condition of the engine, with less than 1,000 hours use held a strong factor on the question of the most probable cause of the broken roller. Recovery allowed for the cost of repairs, less the cost of the replacement cam roller and labor for installing same. "This is proper, as the cost of replacing the defective part is not covered by the Inchmaree clause in any event."

A defect or flaw in the metal which is not discoverable by customary tests constitutes a latent defect within the meaning of the Inchmaree clause.

MARINE INSURANCE - 30. Actions on Policies - Burden of Proof.

Proof of latent defect may be sufficiently established by other than direct evidence. "An assured while having the burden of bringing his claim within policy coverage should not have to do more than in an ordinary case of so-called circumstantial evidence where proof is permitted to rest upon persuasive inference." "An inference of fact is only sufficient proof in a legal sense when all other reasonable inferences but the fact to be proven are reasonably excluded. If the inference does so prevail it constitutes proof in the legal sense."

OPINIONBY: WAKEFIELD

OPINION:

CLAUDE E. WAKEFIELD, Arbitrator:

The tug Dusty while under way towing logs in the vicinity of Sunset Beach on Puget Sound encountered a serious engine breakdown. The accident occurred on March 16, 1951 at about 11 o'clock a.m. after the vessel had been underway on the voyage in question for some time. The immediate difficulty was evidenced by a loss of power and the engine's misfiring and slowing down. Due to this condition the throttle was immediately reduced somewhat and the engine then stopped running altogether. Upon examination the engine was found to be hot and steaming and it would not run. The tug was towed to port where an examination of the engine disclosed extensive damage due to heat resulting in a cracked crankshaft, the scoring of postons and cylinder liners, cylinder head cracked and the cam shaft warped.

This engine is a six cylinder General Motors diesel engine Model 671. The records show that the engine was completely rebuilt in August, 1950 and had run less than 1,000 hours at the time of the accident.Except for the damage resulting from the accident being considered herein, the engine appeared to be relatively new and well maintained.

Examination of the engine following the accident revealed that the cause of damage was a broken cam roller and pin. The survey report states the cause of damage as follows:

"The cam follower roller operating the fuel injection mechanism to No. 3 cylinder was found broken and a part of this case hardened roller had become wedged between the cam shaft eccentric and the cast iron water jacketed cylinder block causing the block to break through and allowing the fresh water to run out of the broken cylinder wall passage and into

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the lubricating oil pump. This caused the engine to build up an excessive amount of heat due to loss of cooling medium and diluted lubrication."

The factual problem is the cause of the breaking of the cam roller. If this roller broke due to latent defect, the resulting damage would appear to be covered by the applicable insurance policy. If the break resulted from ordinary wear and tear or weakness of design it is not covered. Other possible causes have been suggested, to-wit, a temporary stoppage of the orifice which supplies the diesel oil to the cylinder resulting in a tremendous surge of pressure at this point, which pressure would break the roller and pin and also the further possibility that the first breaking might have been of the block itself.

Inquiry by the arbitrator of various engine experts has warranted the conclusion that the damage was caused as reported by the surveyor and that the only issue here is the cause of the broken cam roller.

Claim for the damage is made upon underwriters under the outstanding Hull policy written on American Hulls (Pacific) Form 1944 (Revised November, 1945). It is obvious that the claim herein considered can only constitute a claim under the policy on the basis of coverage afforded under the Inchmaree clause as the accident in question is not one within the coverage of the "perils clause" (*Thames and Mersey Marine Insurance Co. vs. Hamilton Frasern Co., 12 App. Cas. 484;* House of Lords 1887). The Inchmaree clause in the policy under consideration is as follows:

"9. This insurance also specifically to cover (subject to the Average Warranty) loss of or damage to hull or machinery directly caused by the following: --

Accidents in loading, discharging or handling cargo, or in bunkering or in taking in fuel;

Explosions on shipboard or elsewhere;

Bursting of boilers, breakage of shafts or any latent defect in the machinery or hull (excluding, however, the cost and expense of repairing or renewing the defective part);

Contact with Aircraft;

Negligence of Master, Charterers, Mariners, Engineers or Pilots;
Provided such loss or damage has not resulted from want of due diligence by the Owners of the Vessel, or any of them, or by the Managers.

Masters, Mates, Engineers, Pilots or Crew not to be considered as part owners within the meaning of this clause should they hold shares in the Vessel."

The pertinent portion of this clause with respect to the claim presented here is that affording coverage for loss of or damage to machinery caused by "any latent defect in the machinery * * *."

The assured contends the breaking of the cam roller resulted from a latent defect in this part and that such breaking was the cause of the extensive damage to the engine. The underwriter denies that there is any proof that the cam roller broke due to latent defect within the meaning of the Inchmaree clause.

No issue is raised as to any want of diligence by the owner or as to the proper amount or damage. The surveyor has approved expenses and repairs in the sum of $1,820.00 as fair and reasonable. The assured has put forward a claim under the policy in the sum of $1,816.92, which figure deducts the cost of one cam roller and labor for installing the roller in the sum of $3.30. This is proper as the cost of replacing the defective part is not covered by the Inchmaree clause in any event (*Scindia Steamships (London) Ltd. vs. London Assurance, 56 Lloyd's List L.R. 136; Director General of Railroads vs. Mellon Insurance Co., 1926 A.M.C. 1449, 14 F.(2d) 997; Berland vs. Standard Marine Insurance Co., Ltd., 1925 A.M.C. 1116, 125 N.Y. Misc. 395).*

In MacColl & Pollock, Ltd. vs. Indemnity Mutual Marine Assurance (1930), 47 The Times L.R. 26, 27, the rule was stated "that the existence of a latent defect was not a casualty, and the cost of replacing something which was found to have had a latent defect was not recoverable as loss or damage due to the latent defect. The principle was that only

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damage to other things caused by the latent defect was covered; the original vice of the thing which had the latent defect was not."

Considerable controversy has from time to time existed between underwriters and assured as to the meaning of "latent defect" and its application to the facts of particular claims. The authorities are not too helpful on this issue but I find in the arbitration case of *National Bulk Carriers vs. American Marine Hull Insurance Syndicate, 1949 A.M.C. 340, 346,* a statement of the problems with which I agree.

"When consideration is given to the circumstances of the origin of the Inchmaree Clause and to the fact that it expressly covers damage to hull or machinery whether caused on the one hand by the bursting of boilers, breakage of shafts, or any latent defect in the hull or machinery, or on the other hand by the negligence of master, charterers, mariners, engineers or pilots, it does not seem consistent with the purpose and scope of the clause to put a strained construction on the word 'latent.' The natural meaning of latent defect is a concealed defect, a defect that is not discoverable by ordinary practicable means."

The following cases dealing with the problem of alleged latent defect illustrate the attitude and thinking of the courts and will be helpful here.

Weakness of design has been distinguished from latent defect in the case of *Jackson vs. Mumford (1902), 8 Com. Cas. 61.*

"* * * I am * * * unable to regard 'latent defect in the machinery' as covering a weakness of design. It is not * * * a natural interpretation of the words. * * *. * * * while the proper effect to be given to the word 'latent' in a connexion of this sort may vary with circumstances * * *, the phrase 'defect in machinery' in a business document means a defect of material, in respect either of its original composition or in respect of its original or its after acquired condition. * * * it is sufficient * * * to say that the phrase, at all events, does not * * * cover the erroneous judgment of the designer as to the effect of the strain which his machinery will have to resist, the machinery itself being faultless, the workmanship faultness, and the construction precisely that which the designer intended it to be." (pp. 68-69)

In *Cleveland & B. Transit Co. vs. Insurance Co. of North America, 115 Fed. 431,* the bed plate of the engine cracked and it was found that the cracking was due to a defect in the metal known as a "cold shut" formed in the casting by molten metals of uneven temperature. This was held to be a latent defect.

In *Oceanic S.S. Co. vs. Faber (1906), 11 Com. Cas. 179,* a fracture in the tail shaft which resulted from imperfect welding was considered to be a latent defect.

In *Scindia Steamships (London) Ltd. vs. The London Assurance (1937) 1 K.B. 639,* the tail shaft broke while being drawn to remove the propeller. The break was held to be due to a latent defect in the shaft.

Thus a defect or flaw in the metal which is not discoverable by customary tests is a latent defect within the meaning of the Inchmaree clause. Other conditions not material here may also constitute latent defects for this purpose.

In this case nothing remained of the cam roller which broke. No piece could be found for examination and test of the metal and there is no specific proof of the existence of a flaw or defect in the cam roller. However, I believe proof may be sufficiently established in these cases by other than direct evidence. An assured while having the burden of bringing his claim within policy coverage should not have to do more than in an ordinary case of socalled circumstantial evidence where proof is permitted to rest upon persuasive inference.

In the arbitration matter on *National Bulk Carriers vs. American Hull Insurance Syndicate, 1949 A.M.C. 340, 347,* the arbitrator was confronted with the same problem, -- "neither the screw nor the washer could be located." After a careful consideration of the facts and the "most probable cause" he found: -- "The reasonable inference is that the eventual dislodgment was due to a defect in the material or tempering of the lock washer."

The arbitrator seems to have arrived at the "reasonable inference" and "most probable cause" based upon the facts determined by him from the surveyor and independently that the screw holding the clip could not have come loose if the lock washer were properly tempered and in good condition. The tempering of the lock washer is all important. If it is

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tempered too much the washer could break under tension and if not tempered sufficiently it could be soft and would not exert sufficient pressure or tension on the machine screw. He concluded that the failure of the lock washer was due to one or the other of these causes and that "the reasonable inference is that the eventual dislodgment was due to a latent defect in the material or tempering of the lock washer."

An inference of fact is only sufficient proof in a legal sense when all other reasonable inferences but the fact to be proven are reasonably excluded. If the inference does so prevail it constitutes proof in a legal sense. Such a rule is necessary as in many cases such as the one being here considered no other proof is possible under all the circumstances and yet the claim asserted may well be meritorious. Therefore the arbitrator has considered the reasonable inferences on the basis of inquiry of persons with experience in such matters. The possibility of latent defect in the metal and/or the case hardening of the cam roller is, of course, a strong inference in this case. It is known that all metals such as that of which the cam roller in question was fabricated are subject to defects or flaws on occasions and that these cannot be invariably detected by any ordinary tests. Also, the case hardening of such metals is a somewhat difficult process and there may be possible resulting defects in such processing.

Actual instances of a broken cam roller due to defect in the metal have been disclosed to the arbitrator.

A further possible inference is that of ordinary wear and tear or a failure of the bushing between the pin and the cam roller.However, investigation of this possibility discloses that the result in such cases is not a breaking of the roller. The roller may become worn on the surface or upon a failure of the bushing the roller will wear flat and become wedged into the cam follower. In these cases the roller does not turn on the pin and thus becomes flat and eventually wears down finally permitting the follower shoulders to come in contact with the cam eccentrics resulting in a crushing and wearing of both the roller and the follower. However, the roller does not break in such cases and this condition is also usually noted before damage results due to extensive noise in the engine. Normally a cam roller is not looked at or considered possibly worn or defective until it has been in use approximately 6,000 hours, and in fact is hardly ever required to be replaced for a much longer time. In other words, the normal life of a cam roller is most always in excess of 6,000 hours and if it does wear to the extent of requiring replacement it does not break but rather wears flat and is wedged into the follower as mentioned above.

It is the concensus of those persons interviewed that if the cam roller actually broke and fell out of the cam follower as this one did, it could only happen as a result of a fracture or flaw in the metal of the cam roller. One other identical instance of such a breaking and similar damage to the engine has been disclosed to the arbitrator thus indicating not only the possibility but the actual happening of such an occurrence. The new and good condition of the engine with less than 1,000 hours use it also a strong factor in this case on the question of the probable cause of the broken roller. No actual precedent for such damage has been found which resulted from any other possible cause suggested herein or from any cause other than a latent defect. This does not mean that other causes are not possible but certainly they are not reasonably probable and therefore the inference of latent defect must prevail here. In my opinion the inference is sufficient to constitute proof in a legal sense. The arbitration of *National Bulk Carriers vs. American Marine Hull Insurance Syndicate (supra)* is a strong precedent for the present case and under all the circumstances of this case should be adopted and followed.

Accordingly it is the decision of the arbitrator that the damage in question resulted from latent defect in the cam roller and that the assured is entitled to his damages in the sum claimed.