

11th March, 1921.

In accordance with your instructions I attended on board the Trawler "AVANT GARDE" on the 9th instant, while the vessel lying afloat at Fecamp, France, for the purpose of holding a special survey upon the main engine cylinders.

The vessel was constructed by Messrs. Cochrane & Sons (Yard No. 41), and the engines and boilers by Messrs. Amos & Smith Ltd. (Engine & Boiler No. 3185), the date of build being 1920, 12th month, as per Hull First Entry Report No. 32354.

The cylinders in question are 15", 25" and 42" diameter x 24" stroke. The H.P. cylinder is fitted with a liner.

Messrs. Chomassi and Leroux, Director and Chief Engineer and Superintendent respectively for the Owners, Messrs. La Peche et Fecamp, Fecamp, and Mr. J. L. Davies and Mr. Hamelin, the Society's Surveyors at Havre were present.

Upon examination the H.P. cylinder liner was found slightly porous at about mid-length of the working surface. The depth of porosity did not appear to extend more than 2 m/m. (About 1/16"

In the case of the M.P. cylinder, the working surface was porous at the forward side of the cylinder wall (i.e. at the inlet in way of the steam and exhaust ports). There are six small patches, the depth of which is from 2 m/m to 15 m/m (about 1/16" to 1/8") below the surface.

In the case of the L.P. cylinder, the porosity extended, in the form of minute pores, at the lower part of the working surface. There are about eight of these porous patches, and the depth of the pores did not appear to extend more than 12 m/m (about 15/32"), the majority being only slightly below the level of the working surface.

The material of the H.P. cylinder liner and of the M.P. and L.P. cylinder castings appears otherwise to be of good quality. The piston rings of each cylinder were carefully examined and these and the cylinder walls were found to shew no sign of wear.

In the case of the H.P. cylinder liner the defects are so slight as to be negligible.

In the case of the M.P. and L.P. cylinders the porosity does not materially affect the strength of the castings, but there is a reasonable doubt as to whether the nature and extent of the defects may or may not eventually cause undue wear of the piston rings and cylinder walls, and, in my opinion, these casting should not have been accepted without the consent of the Owner.

In view of the foregoing I am of the opinion that, as regards the classification of the machinery of the vessel, no further action should be taken.

Whilst at Pecamp the Owners' representatives produced a report from their Mr. A. Reult, dated the 15th September last, in which it is stated that he, in agreement with this Society's Surveyor, refused to accept an L.P. cylinder casting which had just been machined and found very porous, some of the pores extending 8 m/m in depth. He further stated that the Makers were then preparing a new casting to replace the L.P. cylinder to which he referred.

The Owners' representatives at Pecamp contend that, in view of the statement of their Mr. A. Reult, the present M.P. and L.P. cylinders should not have been accepted.

I am, Sir,

Your obedient Servant,

The Secretary,

LONDON.



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