

Lloyd's Register of British & Foreign Shipping

Surveyor's office, Stockholm.

Postal and telegraphic address: Lloyd's Register, Stockholm. Rikstelefon n:o 4161 & 3342.

LOYD'S REGISTER the 30th May 1914.

LONDON

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The Secretary

to the Committee of Lloyd's Register,

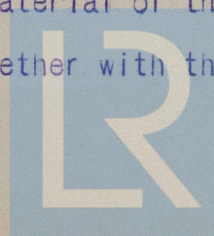
London.

Sir,

With regard to the contents of Your favour of the 21st inst., respecting the three air receivers for 150 lbs. working pressure, stated to have been supplied with the two Bolinder motors, of 50 B.H.P. each, delivered to the motor vessel "KINGS-HOLME", Messrs. I.J. Abdela & Mitchells no. 355, I have respectfully to offer the following ^{preliminary} explanation.

These air receivers are not steel castings but manufactured from soft Siemens Martin rolled steel plates, with welded longitudinal seams and plate bottoms, at the Avesta Steel Works, situated about 4 hours travelling by express train (only two connections in 24 hours), and the question, how to arrange a satisfactory method of testing the material of these vessels has been frequently discussed by me with the Bolinder Firm. This Firm infers that, when there is only question of testing two or three such steel vessels, the testing of the material of the steel plates in accordance with the Rules together with the inspection of the

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manufature of and hydraulic tests on the receivers would imply about as much cost as the whole cost of manufacture, and that no other classification Body has hesitated to accept in these particular cases the test certificates of the steel works themselves.

Under these circumstances, and as I have feared, that to insist positively on the prescribed tests would imply perhaps a cancelling of the contract and the application for Class in some other Register, I have entered into the following compromise with regard to these air vessels.

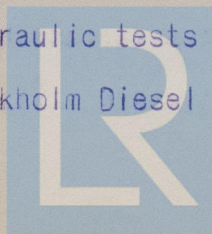
The material is to be soft steel of low tenacity, as per table, contained in Secretary's letter of the 5th June 1912. The welding is to be done by the ordinary water gas method and no oxyacetylene to be used.

The percentage of strength of the longitudinal weld is to be assumed as not more than 70 percent of the solid plate.

The vessels are to be thoroughly annealed in a furnace, after welding is completed.

The hydraulic test, carried out at the steel works, is to be, not twice the working pressure (of 10 Atm.), but 36 Atm., or three times a working pressure, assumed as high as 12 Atm.

I have, however, endeavoured to ascertain the quality of material, used for the very extensive airreceiver manufacture at Avesta, by testing at the works the steel, used for the larger air cylinders for Diesel Motors, and beg to enclose some of the test results of this material, which have all proved entirely satisfactory, as have also the hydraulic tests on these large receivers, carried out by me at the Stockholm Diesel Factory.



In order to comply, so far as possible, with the requirements, laid down in Your favour of the 21st inst., I have communicated with the Avesta Steel Works and obtained from them the promise of a maker's test certificate in this instance, as soon as Mr. Bengtsson, the Manager of the flanging and the welding departments of the works, has returned from a voyage, which he is expected to do with-in a few days.

For the moment, I am only in position to offer the plan of a series of four sizes of these airvessels, which plan was submitted to me in October 1913 and approved with regard to three of the vessels but disapproved as regards the fourth or largest of the reservoirs, as the plate thickness of the cylindrical shell is not sufficient, if the material should be of the lowest tenacity, admitted in Your favour of the 5th June 1912.

I may add, that the difficulty hitherto with regard to the testing of the material for these air vessels will be overcome for the future, as an arrangement has now been successfully attained with the Bolinder Firm for special survey during construction of two thirds of the whole number of marine motors of 80 B.H.P. and above manufactured by them.

As the air receivers are generally ordered in batches of 50 and more, the testing of the material and inspection of the manufacture can henceforth be carried out without giving rise to expenses, which are out of proportion to the value of the manufactured articles.

Mr. Bengtsson's Certificate of affidavit as to the material and mode of manufacture of the three air vessels, now in question, will be forwarded by me immediately on receipt of them.

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I am, Sir, your most obedient servant
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 O. Bakem

Referred to the Chief Engineer Surveyor.

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