

NEW YORK

OCTOBER 20th 1943

S.S. "LEONARDO DA VINCI"
Baltimore Report No.7904

This vessel was built for Italian ownership in 1918, not under Special Survey of this Society. She has now come under the British flag and classification has been applied for.

Extensive reconditioning of machinery has been carried out at Baltimore, but the following departures from the Rules have been noted.

Propeller Shaft.

The sizes of shafting appear to be below Rule and the liners are not fused at the joints. As the vessel is now 18 years old, it is submitted that the shafting might be accepted by the Committee, subject to the propeller shaft being examined every two (2) years.

Pumping Arrangements.

These do not seem to comply with the letter of the Rules, in that the Surveyor reports that no direct bilge suction is fitted in Engine and Boiler Room Compartments. The Surveyor, however, reports these arrangements to be in good condition and such as may be accepted by the Committee, and it is so submitted.

Safety Valves on Watertube Boilers.

The area of High Lift Safety Valves required by the Rules is 9.99 sq.inches. The area fitted is 4.15 sq.inches. The Surveyor states that he pointed out the discrepancy to the representatives of the British Government, Owners of the Vessel, but nothing was done in the matter. He, however, carried out the Rule accumulation test and the Safety Valves were found to function satisfactorily.

The difference between Rule size and actual size appears to be too great to accept in normal times, and it is submitted that they be only accepted as a War Emergency measure, subject to being replaced with Approved Safety Valves of Rule size when the War Emergency is over.

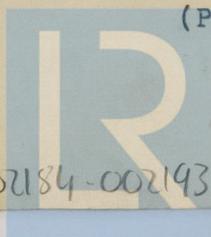
Electric Welding Repairs to "D" Shaped Inboard Water Drums of Water Tube Boilers.

Comparatively minor repairs have been made to the Aft Port, Aft Starboard and Forward Starboard Boilers. In the case of the Forward Port Boiler, a defective piece has been cut out of the shell and replaced by electric welding. A reinforcement was effected by extending the flange of the head inboard, making up the extra length required by electric welding a piece on to the head.

The Surveyor reports, (1) The repair was "normalized" after electric welding, (2) The repair was tested to 350 lbs. (WP = 200 lbs.) by Hydraulic Pressure and afterwards examined under steam, and found satisfactory. The repair is at the end of the Drum which is the strongest section. The Surveyor has recommended it as a Permanent Repair. The Boiler has withstood the same test that would be applied to a new boiler.

(P.T.O.)

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Electric Welding Repairs to Boiler Shell Plates are forbidden by the Rules, but in the Special Circumstances of this case, it is submitted that these repairs might be accepted by the Committee. It would be prudent to add a note in Special Reasons List "E.W. repairs to inboard water drums of Water Tube Boilers to be specially examined at Boiler Survey" to warn Surveyors carrying out future surveys.

Alternatively, if the Committee consider it necessary, the Forward Port boiler could be required to be again examined in 6 months time from date of survey, that is, in February, 1944. It is submitted that the latter course might be the more prudent.

General

These opinions are submitted in accordance with "Instructions to Surveyors", 1927 Edition, Page 13, Paragraphs 18-19, also Page 123, Paragraph 126.

RECOMMENDATION

The machinery of this vessel is eligible, in my opinion, to be classed and to receive the notations LMC 8,43, TS 4,43, FD, and Fitted for Oil Fuel, Flash Point above 150°F., subject to EW repairs to Inboard Water Drum of Forward Port Water Tube Boiler being again examined before the end of February, 1944, and to the Propeller Shafts being again examined in two (2) years time. Safety Valves of W.T. Boilers to be replaced with valves of Rule size when the War Emergency is over.

John S. Heck

Principal Engineer Surveyor.
NEW YORK

*Approved
J. S. Heck
10/20/43*



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