

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

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 No. in. Survey held at Trondhjem & Langesund Date, First Survey 12/7/29 Last Survey 12/6/1930  
 Reg. Book. on the steel single screw steamer "TORRIDAL" (Number of Visits 18)  
 Built at Langesund By whom built Langesunds Mek. Verksted Yard No. 9 Tons { Gross 1381  
 Engines made at Trondhjem By whom made Trondhjem Mek. Verksted Engine No. 274 Net 780  
 Boilers made at " By whom made " Boiler No. 535-36 When built 1930-6  
 Registered Horse Power 122 Owners Ingv. Bjørneboes Rederi AS Port belonging to Kristiansund  
 Nom. Horse Power as per Rule 152 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted Yes  
 Trade for which Vessel is intended general 14 1/2 (2) x 31 1/2 (2) — 3 1/2 when made 1930

ENGINES, &c.—Description of Engines Direct acting inverted, compound expansion Revs. per minute  
 Dia. of Cylinders 20375 mm 20800 Length of Stroke 800 mm No. of Cylinders 4 No. of Cranks 4  
 Crank shaft, dia. of journals as per Rule 261 Crank pin dia. 262 mm Crank webs Mid. length breadth 492 mm Thickness parallel to axis 164  
 as fitted 262 mm Mid. length thickness 164 Thickness around eye-hole 230 mm  
 Intermediate Shafts, diameter as per Rule 248 Thrust shaft, diameter at collars as per Rule 260.5  
 as fitted 248 mm as fitted 262  
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 288 mm  
 as fitted 300 the screw shaft fitted with a continuous liner no  
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the  
 as fitted as fitted propeller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes  
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes  
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after  
 end of the tube shaft Yes Cedervall's patent Length of Bearing in Stern Bush next to and supporting propeller 1300 mm  
 Propeller, dia. 4100 mm Pitch 4750 mm No. of Blades 4 Material cast iron whether Movable No Total Developed Surface 5.26 m<sup>2</sup>  
 Feed Pumps worked from the Main Engines, No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓  
 Bilge Pumps worked from the Main Engines, No. 1 Diameter 90 mm Stroke 150 mm Can one be overhauled while the other is at work ✓  
 Feed Pumps { No. and size Two, simplex, 165 x 115 x 200 Pumps connected to the { No. and size 1 duplex 135-125-125  
 How driven independent steam engine Main Bilge Line How driven independent steam  
 Ballast Pumps, No. and size 1 duplex 190 x 200 x 175 Lubricating Oil Pumps, including Spare Pump, No. and size ✓  
 Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room 1 @ 64 mm, 1 @ port in E.R. — 1 centre @ 64 mm, 1 @ port @ 64 mm. R.R.  
 In Holds, &c. Fore hold: 1 suction each side 76 mm, after hold, 1 suction each side 76 mm.  
After well a tunnel well suction 64 mm  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 89 mm Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 1 @ 89 mm Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both valves & cocks  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line above  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes  
 What Pipes are carried through the bunkers Steam & oil pipes to fore winches How are they protected wooden casings  
 What pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one  
 compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from above load w.l.

MAIN BOILERS, &c.—(Letter for record E. 18/4/29 28/10/29 Total Heating Surface of Boilers 2097.2 ft.<sup>2</sup> 2 SB  
 Is Forced Draft fitted Yes Howden's No. and Description of Boilers 2 cyl. multitubular Working Pressure 205 lb  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? ✓ If so, is a report now forwarded? ✓  
 PLANS. Are approved plans forwarded herewith for Shafting E. 3/4/29 14/10/29 Main Boilers E. 18/4/29 Auxiliary Boilers ✓ Donkey Boilers ✓  
 (If not state date of approval) 28/10/29  
 Superheaters E. 15/1/30 General Pumping Arrangements E. 5/7/29 Oil fuel Burning Piping Arrangements ✓

## SPARE GEAR. State the articles supplied:—

4 connecting rod top-end bolts and nuts 1 pair of conn. rod brasses.  
 2 " " bottom end " " 2 " " cross head " "  
 2 main bearing bolts. 2 brasses for cam shaft  
 2 sets of coupling " " 2 lock nuts  
 1 " feed and bilge pump valves. 2 " " screws  
 1 " piston springs for H.P. cyl. 4 " piston screws with washers  
 1 " " " L.P. " 2 " valve lifters, bottom  
 A quantity of assorted bolts and nuts 2 " " top  
 From of various sizes. 4 valve spindles, with screws &c.  
 4 springs for " "  
 6 valve springs. 2 H.P. valves  
 2 L.P. " 1 set Safety valve springs

The foregoing is a correct description,

AS TRONDHJEMS MEK. VERKSTED

Manufacturer.

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