

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office
Date of writing Report 4th June, 1949. When handed in at Local Office 8th June, 1949 Port of Malmö.
in Survey held at Malmö Date, First Survey 25th April Last Survey 23rd May 1949.
No. in Book. 378 on the Tug "HARALD" (Number of Visits 7.)
Gross Tons 188
Net Tons 48
When built 1916
Engines made at Motala By whom built Motala Verk. Nya A. B. Yard No. 464
Engines made at Motala By whom made Motala Verk. Nya A. B. Engine No. 781 when made 1916.
Boiler made at Motala By whom made Motala Verk. Nya A. B. Boiler No. 650 when made 1916.
Registered Horse Power 600 I.H.P. Owners Göteborgs Bågarings- & Bågarings A. B. Port belonging to Göteborg.
Horse Power as per Rule 188 ^{188 = MN} Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.
Made for which Vessel is intended Tug and Salvage Boat.

GINES, & Co. 355 x 570 x 965 - 660. 3 cylinders, triple expansion. Revs. per minute 120.
No. of Cylinders 3 Length of Stroke 26" No. of Cranks 3
Crank shaft, dia. of journals 185 mm. Crank pin dia. 190 mm. Crank webs Mid. length breadth 240 mm. Thickness parallel to axis ✓
as fitted 185 mm. Mid. length thickness 115 mm. shrunk Thickness around eye-hole ✓
Intermediate Shafts, diameter 172 mm. Thrust shaft, diameter at collars 185 mm.
as fitted 172 mm. as fitted 185 mm.
Main Shafts, diameter 200 mm. Is the ✓ screw shaft fitted with a continuous liner No
as fitted 200 mm. as fitted 200 mm.
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 ✓ bell boss ✓
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓
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 ✓
Two liners are fitted, is the shaft lapped or protected between the liners ✓ Is an approved Oil Gland or other appliance fitted at the after
of the tube shaft Yes, Cudworth's Length of Bearing in Stern Bush next to and supporting propeller 800 mm.
Propeller, dia. 2440 mm. Pitch 2750 mm. No. of Blades 4 Material Steel whether Moveable No Total Developed Surface 2.16 sq. feet
Main Engines, No. One Diameter 85 mm. Stroke 280 mm. Can one be overhauled while the other is at work ✓
Auxiliary Engines, No. One Diameter 90 mm. Stroke 280 mm. Can one be overhauled while the other is at work ✓
No. and size One 30 c/h & one 60 c/h. Pumps connected to the No. and size 2 1/2 in above fwd and five pumps.
How driven Steam (Duplex) Main Bilge Line How driven Steam (Duplex)
Fast Pumps, No. and size One, 60 c/h. Lubricating Oil Pumps, including Spare Pump, No. and size ✓
Two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary
Pumps; - In Engine and Boiler Room One 2 1/2"; One 2"
Folds, &c. Hold forward 1-2", Accommodation forward 1-2", Accommodation aft 1-2".

Water Circulating Pump Direct Bilge Suctions, No. and size 1 - 1 3/4 mm. Independent bilge injector Direct Suctions to the Engine Room Bilges,
and size One, 2 1/2". Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes
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
all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Valves
they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates No Are the Overboard Discharges above or below the deep water line Above
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
Pipes pass through the bunkers None How are they protected ✓
Pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓
all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
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
partment to another Yes Is the Shaft Tunnel watertight None Is it fitted with a watertight door ✓ worked from ✓

MAIN BOILERS, & Co. (Letter for record 29.4.49) Total Heating Surface of Boilers 142.59 mtr.² 140.29 mtr.² = 1510 ft.²
Forced Draft fitted No No. and Description of Boilers One, single end scotch Working Pressure 11.25 kg/cm²
(160 lb/sq. in.)
A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓
ANS. Are approved plans forwarded herewith for Shafting 28.4.49 Main Boilers 28.4.49 Auxiliary Boilers ✓ Donkey Boilers ✓
(If not state date of approval)
Heaters ✓ General Pumping Arrangements 28.4.49 Oil fuel Burning Piping Arrangements ✓
ARE GEAR. State the articles supplied. Found in order, except bottom and top end bearings.

The foregoing is a correct description,

Manufacturer.



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003458-003465-0034

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

Dates of Examination of principal parts—Cylinders
Pistons
Crank shaft
Tube shaft
Stern tube
Engine and boiler seatings
Piston Rods
Thrust shaft
Screw shaft
Slides
Covers
Connecting rods
Intermediate shafts
Propeller
Engines holding down bolts

Examination of fitting sea connections
Examination of pumping arrangements
Boiler & fuel
Engines tried under steam

Main boiler safety valves adjusted
Crank shaft material
Intermediate shafts, material
Screw shaft, material
Is an installation fitted for burning oil fuel
Have the requirements of the Rules for carrying and burning oil fuel been complied with
Is this machinery duplicate of a previous case
General Remarks
Thrust shaft material
Identification Mark
Thrust shaft material
Identification Mark
Tube shaft, material
Identification Mark
Steam Pipes, material
Test pressure
Date of Test
Is the flash point of the oil to be used over 150°F.

The valves, cocks, pipes & strainers the bridge pumping arrangement examined. In addition to pumps and pipes indicated on the noted plans there is one fire pump of 60^l/hr capacity installed later, with piping cross connection enabling same and the anti-fuel pump to draw from each compartment in the vessel. Propeller and fastenings of sea connection examined. Engine & boiler seatings and engine holding down bolts, bed plate, column and fastenings, and the valve gear examined. Dimensions of shafting controlled. The main engine and all auxiliaries examined under working conditions. To complete the survey - Stern shaft to be drawn and examined. Crank, thrust and intermediate shafting with bearings examined. Main engine and all pumps and condensers to be opened and examined. Main steam piping exposed, tested and examined.

So far as seen and examined the machinery is in satisfactory condition and the vessel eligible, in my opinion, pending completion of the survey, for a notation in the Register Book "Machinery Class Contemplated".

The amount of Entry Fee ... £
Special ... £
Donkey Boiler Fee ... £
Travelling Expenses (if any) £
When applied for, 8th June 1949
When received, 19

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI, 29 JUL 1949

Assigned

Machinery class contemplated

B.S. 4.49



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