

REPORT ON OIL ENGINE MACHINERY.

No. 12135

RECEIVED

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Writing Report

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NEWCASTLE-ON-TYNE

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Survey held at Copenhagen Port of CopenhagenDate, First Survey 26/3 1945 Last Survey 24/3 19 47Book. "AROS" Number of Visits 41Single Screw vessel B & W ENGINE DESIGNATED "HELSINGBORG I." Tons Gross 3162 Net 2132By whom built Blyth Dry Dock & Shipbuilding Co. Ltd. Yard No. 334 When built 1946By whom made a/s Bismarck & Wain Engine No. 3837 When made 1946By whom made Boiler No. 1 When made 1946Horse Power 3950 Owners 900 = MN Is Refrigerating Machinery fitted for cargo purposes YES Port belonging to INTERNATIONALHorse Power as per Rule 900 = MN Is Electric Light fitted yesType of Engines 862 V6 Diesel, trunk type 2 or 4 stroke cycle 2 Single or double acting singleMaximum pressure in cylinders 4.9 kg/cm² Diameter of cylinders 620 mm Length of stroke 150 mm No. of cylinders 8 No. of cranks 8Indicated Pressure 6.5 kg/cm² of bearings, adjacent to the crank, measured from inner edge to inner edge 796 mmRevolutions per minute 120 Flywheel dia. 2136 mm Weight 2097 kg Is there a bearing between each crank yesSolid forged as per Rule 399 mm Means of ignition compression Kind of fuel used Diesel oilSemi built as fitted 435 mm Crank pin dia. 435 mm Crank webs 730 mm Mid. length breadth 730 mm Kind of fuel used Diesel oilAll built as fitted 435 mm Crank webs 730 mm Mid. length thickness 270 mm Thickness parallel to axis 270 mmSteel Shaft, diameter as per Rule 3702 mm Intermediate Shafts, diameter as per Rule 328 mm Thrust Shaft, diameter at collars as fitted 400 mmShaft, diameter as per Rule 3702 mm Screw Shaft, diameter as per Rule 375 mm Is the (tube) shaft fitted with a continuous liner no linerLiners, thickness in way of bushes as per Rule 3502 mm Thickness between bushes as per Rule 3502 mm Is the after end of the liner made watertight in theIf the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yesIf 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 afterIf so, state type Bismarck & Wain Length of bearing in Stern Bush next to and supporting propeller 1500 mmPitch 4200 mm No. of blades 4 Material Bronze whether moveable No Total developed surface 8.3 sq. feetIs a governor or other arrangement fitted to prevent racing of the engine when decoupled yes Means ofThickness of cylinder liners 46-42 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

Cooling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yesPumps worked from the Main Engines, No. Two Diameter 5 7/8" Stroke 7" Can one be overhauled while the other is at work yesConnected to the Main Bilge Line No. and size 1 Ballast pp. 150 T/H 1 Bilge pump, 20 Tons/H 2 M.E. pumps, 5 1/8" dia x 7"How driven Electric motor Electric motor Levers

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Pumps, No. and size 1 off 150 t/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 off 170 t/hIndependent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliaryPumps, No. and size:—In machinery spaces Six @ 2 1/2" In pump room yesNo. 1 — 2 1/2" P+S; No. 2 Hold, 3 1/2" P+S; No. 3 Hold, 2 1/2" P+S; No. 4 Hold, 2 1/2" P+S; No. 5 Hold, 2 1/2" P+S;Power Pump Direct Suctions to the engine room bilges, No. and size 2 @ 4 1/2"Bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction in the machinery spaces led from easilymud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes Are they fixedConnections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks yes Are they fixedHigh on the ship's side to be seen without lifting the platform plates yes Are the overboard discharges above or below the deep water line belowEach 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 noneDo they pass through the bunkers none How are they protected yes Have they been tested as per Rule yesDo they pass through the deep tanks none Have they been tested as per Rule yesDo they pass through the deep tanks none Have they been tested as per Rule yesDo they pass through the deep tanks none Have they been tested as per Rule yesDo they pass through the deep tanks none Have they been tested as per Rule yes

0010-800400-0100

Lloyd's Register Foundation

AIR RECEIVERS:—Have they been made under survey... State No. of report or certificate... 4c.
Is each receiver, which can be isolated, fitted with a safety valve as per Rule...
Can the internal surfaces of the receivers be examined and cleaned... Is a drain fitted at the lowest part of each receiver...
Auxiliary Air Receivers, No. 1... Cubic capacity of each 250 cu. ft. Internal diameter 380 mm thickness 10 mm
Seamless, lap welded or riveted longitudinal joint... Material S.M. steel Range of tensile strength 41-47 kg/mm² Working pressure Actual...
Starting Air Receivers, No. 1... Total cubic capacity 12 m³ Internal diameter 1806-1854 mm thickness 24 mm
Seamless, lap welded or riveted longitudinal joint... Material S.M. steel Range of tensile strength 47.5 kg/mm² Working pressure Actual...
IS A DONKEY BOILER FITTED... If so, is a report now forwarded...
Is the donkey boiler intended to be used for domestic purposes only...
PLANS. Are approved plans forwarded herewith for shafting... Receivers... Separate fuel tanks...
Donkey boilers... General pumping arrangements... Pumping arrangements in machinery space...
Oil fuel burning arrangements... SPARE GEAR.
Has the spare gear required by the Rules been supplied...
State the principal additional spare gear supplied... 1 propeller shaft.

AKTIESELSKABET
BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGERI
The following is a correct description of the machinery and the particulars of the installation as fitted on the vessel for torsional vibration characteristic Manufacturer.
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... Covers... Pistons... Rods... Connecting rods...
Crank shaft... Flywheel shaft... Thrust shaft... Intermediate shafts... Tube shaft...
Screw shaft... Propeller... Stern tube... Engine seatings... Engine holding down bolts...
Completion of fitting sea connections... Completion of pumping arrangements... Engines tried under working conditions...
Crank shaft, material S.M. steel Identification mark... Flywheel shaft, material... Identification mark...
Thrust shaft, material S.M. steel Identification mark... Intermediate shafts, material S.M. steel Identification mark...
Tube shaft, material S.M. steel Identification mark... Screw shaft, material S.M. steel Identification mark...
Identification marks on air receivers... LLOYD'S TEST 41 ATM.
W.P. 25 ATM.
K.L. 13.9.46.

Is the flash point of the oil to be used over 150°F...
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with...
Description of fire extinguishing apparatus fitted... CO₂ & portable foam extinguishers
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo...
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with...
Is this machinery duplicate of a previous case... If so, state name of vessel...
General Remarks (State quality of workmanship, opinions as to class, &c.)

This engine has been built under special survey and in accordance with the Society's Rules the approved plans and the Surveyor's Report dated 18/4 & 4/7 46. The bed plate and the installation are of welded steel plates and have been specially examined during construction and during and after the running test under full power and found satisfactory. The torsional vibration characteristic has been approved by letter E dated 4/7 46. The machinery has been efficiently installed on board, tested under full power working conditions & found satisfactory, & in my opinion is eligible for the notation T.S.OG.
+ L.M.C. 3.48 when the survey has been completed, and the notation T.S.OG.

The amount of Entry Fee...
2/3 Special ... £2200.-
1 Starting Air Receiver ... 125.-
Donkey Boiler Fee...
Newcastle - Installation ... £85-0-0
Travelling Expenses (if any) £
When applied for... 44 19 47
When received... 19
Committee's Minute...
Assigned + L.M.C. 3.48 Oil Eng. O.G.
Survey of Machinery
Newcastle-on-Tyne
J. Bowman
Surveyor to Lloyd's Register
16 April 1948
FRI. 21 MAY 1948