

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

10 NOV 1951

Date of writing Report 12th October 1951 When handed in at Local Office 19 Port of Copenhagen
 No. in Survey held at Elsinore Date, First Survey 17th October 1950 Last Survey 27th September 1951
 Reg. Book 40085 on the Steel S. TH. ADLER SVANHOLM (Number of Visits 55) Tons (Gross 3040.57 Net 1598.02)
 Built at Elsinore By whom built Helsingør Skibsværft & Mask Yard No. 304 When built 1951
 Engines made at Elsinore By whom made Helsingør Skibsværft & Mask Engine No. 446 When made 1951
 Boilers made at Elsinore By whom made Helsingør Skibsværft & Mask Boiler No. 1121 When made 1951
 EXHAUST TURBINE 400 Owners Det Danske Maskinfabrik Port belonging to Copenhagen
 Registered Horse Power 1350 RECIPROCATING ENG 366 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 Nom. Horse Power as per Rule 366 Trade for which vessel is intended Open sea service

ENGINES, &c.—Description of Engines Vertical compound (2HP, 1LP) and exhaust steam turbine Revs. per minute 115
 Dia. of Cylinders HP: 2x400 1/2 LP: 1x1000 Length of Stroke 950 1/2 No. of Cylinders 3-2HP, 1LP No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 264 1/2 Crank pin dia. 265 1/2 Crank webs Mid. length breadth 430 1/2 Thickness parallel to axis 165 1/2
as fitted 265 1/2 Mid. length thickness 165 1/2 shrunk Thickness around eye-hole 122.5 1/2
 Intermediate Shafts, diameter as per Rule 251 1/2 (Max. cut off in HP cyl. 45% of stroke) as per Rule 264 1/2
as fitted 273 1/2 Thrust shaft, diameter at collars as fitted 275 1/2
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 309 1/2 at top of cone Is the tube shaft fitted with a continuous liner No
as fitted 280 1/2 at coupling as per Rule as fitted
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as fitted Is the after end of the liner made watertight in the 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 yes
 at yes If so, state type Cedervall's patent oil gland Length of Bearing in Stern Bush next to and supporting propeller 1270 1/2
 Propeller, dia. 3964 1/2 Pitch 2734 1/2 No. of Blades 4 Material bronze whether Moveable No Total Developed Surface 5.64 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 110 1/2 Stroke 250 1/2 Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 110 1/2 Stroke 250 1/2 Can one be overhauled while the other is at work yes
 Feed Pumps { No. and size 2 off simplex 8 1/2 x 6 x 13 1/2 Pumps connected to the Main Bilge Line { No. and size 1 off 170 5/8 (ballast) 1 off 25 1/2 (sea vent) 2 bilge 30 1/2
 How driven steam How driven steam steam main eng
 Ballast Pumps, No. and size 1 off duplex 10 x 11 x 10 - 170 5/8 Lubricating Oil Pumps, including Spare Pump, No. and size 1
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room 3 off 75 1/2 + direct suction
 In Pump Room 1 In Holds, &c. Hold I: 2 off 90 1/2, Hold II: 2 off 90 1/2

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 off 140 1/2 Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, No. and size 1 off 100 1/2 ballast 1 off 65 1/2 sea vent 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 Valves except both blow off 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 pass through the bunkers None How are they protected as per Rule
 What pipes pass through the deep tanks as per Rule Have they been tested as per Rule yes
 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 No tunnel Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 3914 sq feet = 363.64 m²
 Which Boilers are fitted with Forced Draft Both boilers Which Boilers are fitted with Superheaters Both boilers
 No. and Description of Boilers 2 off single ended return multibubblers Working Pressure 220 lbs/10 = 15.5 kg/cm²
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? no
 Can the donkey boiler be used for other than domestic purposes no

PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers no Donkey Boilers no
 (If not state date of approval)
 Superheaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes
 State the principal additional spare gear supplied as per Rule

The foregoing is a correct description.
 HELSINGØR SKIBSVÆRFT OG MASKINBYGGERI
 AKTIESELSKAB

Manufacturer.



1950 17/10 - 20/10 - 15/12 1951 2/11 - 11/11 - 17/11 - 27/11 - 5/12 - 8/12 - 15/12 - 22/12 - 26/12 - 2/1 - 9/1 - 15/1 - 28/1
 During progress of work in shops - - 30/3 - 10/4 - 13/4 - 17/4 - 21/4 - 26/4 - 8/5 - 10/5 - 16/5 - 21/5 - 29/5 - 14/6 - 21/6 - 27/6 - 30/7 - 31/7
 3/8 - 6/8 - 13/8 - 15/8 - 21/8 - 27/8 - 4/9 - 6/9
 1951 4/7 - 13/7 - 17/7 - 23/7 - 31/7 - 13/8 - 15/8 - 21/8 - 25/8 - 29/8 - 4/9 - 6/9 - 14/9
 During erection on board vessel - - - 18/9 - 21/9 - 22/9
 Total No. of visits 55

Dates of Examination of principal parts - Cylinders 2/11 - 11/11 - 17/11 - 27/11 - 8/12
 Slides ✓ Covers 2/11 - 27/11 - 4/12 - 15/12 - 22/12 - 26/12
 Pistons 10/5 Piston Rods 10/5 Connecting rods 22/12
 Crank shaft 2/11 - 5/12 Thrust shaft 20/11 - 5/12 Intermediate shafts 16/5
 Tube shaft ✓ Screw shaft 14/6 Propeller 4/9
 Stern tube 15/2 - 9/3 Engine and boiler seatings 4/7 - 13/7 - 17/7 Engines holding down bolts 17/7

Completion of fitting sea connections 13/4 - 27/6 - 4/9
 Completion of pumping arrangements 4/7 - 17/7 - 23/7 - 13/8 - 25/8 Boilers fixed 17/7 Engines tried under steam 18/9 - 21/9
 Main boiler safety valves adjusted 14/9 Thickness of adjusting washers 22/12
 Crank shaft material *Pennine M. Engd. Steel* Identification Mark L4 5.2.51 Thrust shaft material *S.M.S. Steel* Identification Mark L4 5.2.51
 Intermediate shafts, material *S.M.S. Steel* Identification Mark L2 16.5.51 Tube shaft, material *S.M.S. Steel* Identification Mark L4 5.2.51
 Screw shaft, material *S.M.S. Steel* Identification Mark L14.6.5 Steam Pipes, material *S.M.S. Steel* Test pressure 50 atm Date of Test 4/9

Is an installation fitted for burning oil fuel No ✓ Is the flash point of the oil to be used over 150° F. ✓
 Have the requirements of the Rules for the use of oil as fuel been complied with ✓
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ✓ If so, have the requirements of the Rules been complied with ✓
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *yes* ✓
 Is this machinery duplicate of a previous case No ✓ If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery has been constructed and installed on board under special survey in accordance with the Rules, the approved plans and the Secretary's letters E dated 3/11 - 15/11 - 22/12/50*

9/2.1951
The material has been tested as required by the Rules and the workmanship is good.

The machinery tested under working conditions at a basin trial and on the trial trip and found satisfactory

The service IHP is 1300 at 105 Revs/min, speed 11 knots

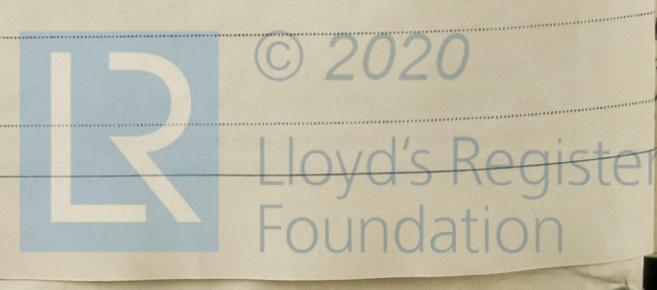
An interim certificate issued as per copy enclosed.

Recommend the vessel's machinery to have notation of *LMC-9.51* 220 lbs. 04. LP turbine with S.R. gearing and chain drive. Strengthened for navigation in ice.

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|------------------------------------|-------|---|-------------------|
| The amount of Entry Fee ... £ | : | : | When applied for, |
| Special ... | 26.96 | : | 2/11 19 51 |
| Donkey Boiler Fee ... £ | : | : | When received, |
| Travelling Expenses (if any) ... £ | 2.67 | : | 19 |

Date *FRI. 30 NOV 1951*
 Committee's Minute *+ LMC 9.51*
FD. 25B 220/6 Spt.

L. Clausen
 Engineer Surveyor to Lloyd's Register of Shipping.



Certificate to be sent to Surveyors Office, Copenhagen

(The Surveyors are requested not to write on or below the space for Committee's Minute.)