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Mdb. Rpt No. 19140

GENERATING

No. 120287

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 2nd MAY 1950 When handed in at Local Office 3rd MAY 1950 Port of LONDON

No. in Reg. Book Survey held at PETERBOROUGH Date, First Survey 30th NOV. 1949 Last Survey 10th FEB. 1950 (Number of Visits THREE)

on the M.V. "LUMEN" Tons Gross 10146 Net 5865

Built at MIDDLESBOROUGH By whom built Messrs. Smiths Dock Co Ltd. Yard No. 1197 When built

Engines made at PETERBOROUGH By whom made Messrs. PETER BROTHERHOOD Ltd. Engine Nos 11780A 11780B When made 1949-50

Boilers made at Dynamo No 21333 By SLD Forge. 50 KW Boiler No. When made

Registered Horse Power 2 @ 50KW Owners Port belonging to

Nom. Horse Power as per Rule 3·8 each Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

ENGINES, &c.—Description of Engines BROTHERHOOD Compound 8" + 12" x 7½" Revs. per minute 500

Dia. of Cylinders 8" HP 12" LP Length of Stroke 7½" No. of Cylinders TWO No. of Cranks TWO

Crank shaft, dia. of journals as per Rule as approved as fitted 3½" Crank pin dia. 3½" Crank webs Mid. length breadth 7½" Mid. length thickness 1¾" Thickness parallel to axis shrunk Thickness around eye-hole

Intermediate Shafts, diameter as per Rule as fitted

Thrust shaft, diameter at collars as per Rule as fitted

Tube Shafts, diameter as per Rule as fitted

Screw Shaft, diameter as per Rule as fitted

Is the { tube / screw } shaft fitted with a continuous liner { }

Bronze Liners, thickness in way of bushes as per Rule as fitted

Thickness between bushes as per Rule as fitted

Is the after end of the liner made watertight in the propeller boss

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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

If 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 end of the tube at If so, state type Length of Bearing in **Stern Bush** next to and supporting propeller

Propeller, dia. Pitch No. of Blades Material whether Moveable Total Developed Surface sq. feet

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. Diameter Stroke Can one be overhauled while the other is at work

Feed Pumps { No. and size / How driven } **Pumps** connected to the **Main Bilge Line** { No. and size / How driven }

Ballast Pumps, No. and size **Lubricating Oil Pumps**, including Spare Pump, No. and size ONE 4·4 Gals/min

Are two independent means arranged for circulating water through the **Oil Cooler** **Suctions**, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room

In Pump Room In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size **Independent Power Pump Direct Suctions** to the Engine and/or Boiler Room Bilges, No. and size

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes

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

Are all **Sea Connections** fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What Pipes pass through the bunkers How are they protected

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

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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers

Which Boilers are fitted with Forced Draft Which Boilers are fitted with Superheaters

No. and Description of Boilers Working Pressure 120 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

IS A DONKEY BOILER FITTED? If so, is a report now forwarded?

Can the donkey boiler be used for other than domestic purposes

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers
(If not state date of approval) crankshaft approved 25-4-50

Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied 1 set piston rings; 1 set governor springs; 1 OFF each Top and Bottom end bearings with bolts.

For PETER BROTHERHOOD LTD.

The foregoing is a correct description.

DIRECTOR

Manufacturer.

9/5
12/5/50.

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Dates of Survey while building

During progress of work in shops: 30-11-49 24-1-50 10-2-50

During erection on board vessel:

Total No. of visits:

Dates of Examination of principal parts—Cylinders 30-11-49 24-1-50 Slides Covers 30-11-49 24-1-50

Pistons 10-2-50 Piston Rods 10-2-50 Connecting rods 10-2-50

Crank shaft 10-2-50 Thrust shaft Intermediate shafts

Tube shaft Screw shaft Propeller

Stern tube Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Crank shaft material SM Steel Identification Mark 11780A - 955TDS 25-10-48 11780B - 956 TDS - 26-10-48 Thrust shaft material Identification Mark

Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark

Screw shaft, material Identification Mark Steam Pipes, material Test pressure Date of Test

Is an installation fitted for burning oil fuel 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

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. These two generating engines have been built under survey in accordance with the approved plans and the requirements of the Rules. Steel used in their manufacture has been made at Works approved by the Committee and under the supervision of the Society's surveyors. The workmanship is good and the engines are, in my opinion, eligible to be installed in a vessel classed with the Society.

Satisfactory running tests and governor trials were held and witnessed at the Makers' Works of both engines coupled to their generators:

Engine No 11780 A is coupled to GENERATOR No 41332 } 110V 454A 500rpm
— " — No 11780 B " — " — " — " — No 41333 } made by: The Sunderland Forge & Eng. Co. Ltd. (Certificates attached)

This generating set has been securely fitted aboard, tried out under working conditions and found satisfactory.

H. Stewart Jr. F. E. Smith.

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

Certificate to be sent to

The amount of Entry Fee	...	£ : :	When applied for, 3 MAY 1950
Special	... ...	£ 8 : 0 : 0	
Donkey Boiler Fee	... ...	£ : :	When received, ... 19.....
Travelling Expenses (if any)		£ 2 : 8 : 4	

Date FRI. 1 SEP 1950

Committee's Minute See F.E. mchy. dpt

B. S. Bielawski.
Engineer Surveyor to Lloyd's Register of Shipping.

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