

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 23 JUN 1948

Date of writing Report 28 MAY 1948 When handed in at Local Office 28 MAY 1948 Port of London
 No. in Survey held at Bedford Date, First Survey 16 JANUARY Last Survey 4 MAY 1948
 Reg. Book _____ (Number of Visits SEVEN)
 on the Saunders M.V. "British Ranger" Tons { Gross _____ Net _____
 Built at Glasgow By whom built Harland & Wolff. Yard No. 1362. When built 1948
 Engines made at W. Hallen Sans & Co Ltd Bedford. By whom made 2. 75 Kw. Elec light gen. Sets. Engine No. R2/66312. When made 1948
 Boilers made at _____ By whom made _____ Boiler No. _____ When made _____
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Nom. Horse Power as per Rule 3.6 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____
 Trade for which vessel is intended _____

ENGINES, &c.—Description of Engines 75 Kw. Elec light gen Sets. Revs. per minute 500.
 Dia. of Cylinders 10" H.P. + 15" L.P. Length of Stroke 6 1/2" No. of Cylinders 2. No. of Cranks 2.
 Crank shaft, dia. of journals 3 3/8" at Fly end, 3 3/4" in middle, 4 1/2" End Bearings. Crank pin dia. 3 1/2" Crank webs _____ Mid. length breadth 5 1/2" Thickness parallel to axis _____
 _____ Mid. length thickness 2 3/8" shrunk _____ Thickness around eye-hole _____
 Intermediate Shafts, diameter _____ as per Rule _____ Thrust shaft, diameter at collars _____ as fitted _____
 Tube Shafts, diameter _____ as per Rule _____ Screw Shaft, diameter _____ as fitted _____ Is the { tube / screw } shaft fitted with a continuous liner { _____ / _____ }
 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 _____
 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 _____
 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 _____ In Pump Room _____ In Holds, &c. _____

Main Water Circulating Pump Direct Bilge Suctions, No. and size _____ Independent Power Pump Direct Suctions to the Engine 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 _____

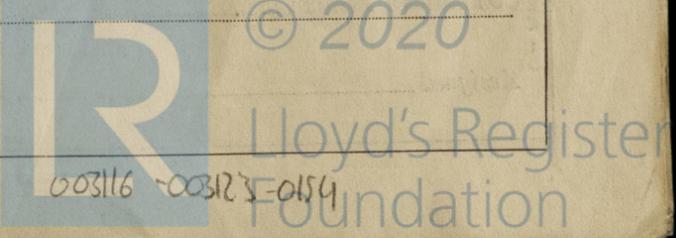
MAIN BOILERS, &c.—(Letter for record _____) Total Heating Surface of Boilers _____
 Which Boilers are fitted with Forced Draft _____ Which Boilers are fitted with Superheaters _____
 No. and Description of Boilers _____ Working Pressure _____
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? _____
 IS A DONKEY BOILER FITTED? _____ If so, is a report now forwarded? _____
 Can the donkey boiler be used for domestic purposes only _____
 PLANS. Are approved plans forwarded herewith for Shafting _____ Main Boilers _____ Auxiliary Boilers _____ Donkey Boilers _____
 (If not state date of approval) _____
 Superheaters _____ General Pumping Arrangements _____ Oil fuel Burning Piping Arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied 1 Set spares as follows. ✓
 State the principal additional spare gear supplied
 1 H.P. Piston Rod. 2 Sets Carbon Brushes ✓
 1 L.P. " " 1 Line Brush Holders. ✓
 1 H.P. Piston + Ring.
 1 L.P. " " "
 1 H.P. Ring.
 1 L.P. " "
 2 Pairs x head Brass Bolts + nuts. ✓
 2 " Conn Rod " " ✓
 1 Set. Gov. Springs
 2 main Bg. Bolts + nuts.
 6 Coupling bolts + nuts + pins.
 The foregoing is a correct description of _____
H. Pledge for W. Hallen Sans & Co Ltd Bedford. Manufacturer.

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent.

NOTE.—The words which do not apply should be deleted.



95.
8/4/48

003116 00312 0154

Dates of Survey while building

During progress of work in shops - - { 1948: JAN 14. 16-23 MAR 2 APR 16. 27. MAY 4

During erection on board vessel - - - {

Total No. of visits 7 (In shops)

Dates of Examination of principal parts—Cylinders 16-1-48 Slides 16-1-48 Covers 16-1-48
 Pistons 16-1-48 Piston Rods 2-3-48 Connecting rods 23-1-48
 Crank shaft 16-1-48 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 *Best Steel* Both 976L LLOYDS 16-1-48 ✓ Identification Mark 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.....If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. *The steam generating sets have been constructed under special survey in accordance with the requirements of the Rules and approved plans; the steel was made at works approved by the Committee, the workmanship is good, and on completion the generator sets were tested upon the bench under full and overload conditions with satisfactory results.*

The sets have been dispatched to Glasgow for fitting on board the vessel

The above generator sets have now been installed in the above named vessel, & tried under working conditions satisfactorily.

*McGee, Engineer
Glasgow 5/6/48*

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

The amount of Entry Fee	2 sets	£ 8 : 0 :	When applied for,
Special	...	£ :	
Donkey Boiler Fee	...	£ :	When received,
Travelling Expenses (if any)		£ 2 : 18 : 11	

R.W. Coomber
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute SEE ACCOMPANYING MACHINERY REPORT
 Assigned 22 JUN 1948
 GLASGOW

