

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

MAR 1 1940

of writing Report 29-2-1940 When handed in at Local Office 29-2-1940 Port of Leith

in Survey held at Leith Date, First Survey 4-12-39 Last Survey 24-2-1940

Book. 909 on the S.S. "EMPIRE WARRIOR" ex "BIANCA" (Number of Visits)

built at Hamburg By whom built Hamburg Elbe Schiffbau Yard No. Tons { Gross 1306 Net 721

Engines made at Oberhausen By whom made Gute Hoffnungshütte Engine No. When built 1921

Boilers made at Hamburg By whom made Deutsche Verft. Boiler No. When made 1921

Registered Horse Power Owners Ministry of Shipping Port belonging to London

Horse Power as per Rule 125 166 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Use for which Vessel is intended

GINES, &c. Description of Engines Triple Expansion Revs. per minute

No. of Cylinders 18, 28, 47 Length of Stroke 31 1/2 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 9 3/8 Crank pin dia. 9 1/16 Crank webs Mid. length breadth. Thickness parallel to axis

Intermediate Shafts, diameter as per Rule 9 Thrust shaft, diameter at collars as per Rule 9 1/16 Thickness around eye-hole

Propeller Shafts, diameter as per Rule 10 3/8 Is the taber shaft fitted with a continuous liner Yes

Brass 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

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

When 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

When 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

Propeller, dia. Pitch No. of Blades 4 Material cast iron whether Movable Solid Total Developed Surface sq. feet

Water Pumps worked from the Main Engines, No. 2 Diameter 2 1/2 Stroke 15 3/4 Can one be overhauled while the other is at work Yes

Oil Pumps worked from the Main Engines, No. 2 Diameter 2 1/2 Stroke 15 3/4 Can one be overhauled while the other is at work Yes

Other Pumps { No. and size one 5.906 x 3.937 + 5.906 Pumps connected to the { No. and size Main Engine, Ballast & General Service Pumps

How driven Steam Main Bilge Line How driven Steam

Water Pumps, No. and size one 7.48 x 8.465 + 9.843 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

Water Pumps; - In Engine and Boiler Room 1 Port, 1 Star aft end of engine room 1 Direct suction on Starboard side

Pump Room In Holds, &c. Forward Hold 1 Port, 1 Starboard Aft Hold 1 Port, 1 Starboard

Water Circulating Pump Direct Bilge Suctions, No. and size one at 4" dia Independent Power Pump Direct Suctions to the Engine Room Bilges,

and size one at 3" dia 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 Both

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

Do all Pipes pass through the bunkers How are they protected

Do all 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 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 Yes Is it fitted with a watertight door Yes worked from top of engine room

IN BOILERS, &c. - (Letter for record S) Total Heating Surface of Boilers 2949

Which Boilers are fitted with Forced Draft None Which Boilers are fitted with Superheaters Both main

and Description of Boilers Two cylindrical Working Pressure 180 lbs/0" 185 lb.

A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

A DONKEY BOILER FITTED? No If so, is a report now forwarded?

Can the donkey boiler be used for domestic purposes only

Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers No Donkey Boilers No

(If not state date of approval) General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR.

Is the spare gear required by the Rules been supplied Yes

What is the principal additional spare gear supplied One screw shaft & one propeller.

The foregoing is a correct description.

Manufacturer.



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W34-0013

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 _____ Slides _____ Covers _____
 Pistons _____ Piston Rods _____ Connecting rods _____
 Crank shaft _____ 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 **23-2-40** Thickness of adjusting washers **P=1/16" S=3/8" SUP.=1/16"** **5"** **STAR BOILER, P=3/8" S=1/16" SUP.**
 Crank shaft material _____ 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 **Steel** Test pressure _____ Date of Test _____
 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 _____
 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 above information is forwarded for the consideration of the Committee.
See Report 9.*

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 ... £	<i>See Rpt. 9.</i>	:	When applied for,
Special ... £	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

J. Campbell
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **TUE. 12 MAR 1940**

Assigned *See Lth. J.E. 20041*