

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Report 19 When handed in at Local Office 19 Port of DURBAN
 Survey held at DURBAN Date, First Survey 22ND SEPT: Last Survey 8TH DEC 1952
 (Number of Visits 6)
 on the STEAM WHALE CATCHER "EMPIRE UNITAS X" Tons {Gross 339
 Net 115
DANZIG By whom built F. SCHICHAU G.M.B.H. Yard No. — When built 1939
 made at VEGESACK By whom made BREMER-YULCAN Engine No. 509 when made 1939
 made at VEGESACK By whom made BREMER-YULCAN Boiler No. 883 when made 1939
 Horse Power — Owners BRITISH MINISTRY OF TRANSPORT Port belonging to LONDON
 Power as per Rule MN 281 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES
 which Vessel is intended WHALING PURPOSES

Engines, &c.—Description of Engines TRIPLE EXPANSION STEAM RECIPROCATING Revs. per minute 176
 Cylinders 421 m.m., 660 m.m., 1120 m.m. Length of Stroke 660 m.m. No. of Cylinders THREE No. of Cranks THREE
 dia. of journals as per Rule — Crank pin dia. 220 m.m. Crank webs Mid. length breadth 416 m.m. Thickness parallel to axis 98 m.m.
 as fitted 220 m.m. Mid. length thickness 136 m.m. shrunk Thickness around eye-hole 98 m.m.
 Main Shafts, diameter as per Rule — Thrust shaft, diameter at collars as per Rule —
 as fitted 215 m.m. as fitted 215 m.m.
 Piston Rods, diameter as per Rule — Screw Shaft, diameter as per Rule —
 as fitted NONE as fitted 226 m.m. Is the ~~tube~~ shaft fitted with a continuous liner YES
 Piston Rings, 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
 as fitted 17 m.m. as fitted 15 m.m. YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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 —
 Piston Rings 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
 If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 1165 m.m.
 dia. 2934 m.m. Pitch 2820 m.m. No. of Blades 4 Material CAST STEEL whether Moveable NO Total Developed Surface 3.90 sq. feet
 Piston Rings worked from the Main Engines, No. NONE Diameter — Stroke — Can one be overhauled while the other is at work —
 Piston Rings worked from the Main Engines, No. NONE Diameter — Stroke — Can one be overhauled while the other is at work —
 No. and size 2: 160 m.m. x 450 m.m. STROKE Pumps connected to the { No. and size 2: DUPLEX } * 2 x 102 m.m. x 150 m.m. STROKE. BILGE PUMP.
 How driven STEAM Main Bilge Line { How driven STEAM } 2 x 114 m.m. x 150 m.m. STROKE. TRANS. PUMP.
 Pumps, No. and size 1: DUPLEX. 114 m.m. x 150 m.m. STROKE Lubricating Oil Pumps, including Spare Pump, No. and size NONE
 Independent means arranged for circulating water through the Oil Cooler NONE Suctions, connected to both Main Bilge Pumps and Auxiliary
 Suctions;—In Engine and Boiler Room 3: 50 m.m. IN ENGINE ROOM.
 In Hold: 1: 50 m.m. IN EACH OF THE FORWARD HOLD SPACES.

NOTE A BILGE STEAM EJECTOR IS ALSO FITTED.
 Circulating Pump Direct Bilge Suctions, No. and size 1: 150 m.m. Independent Power Pump Direct Suctions to the Engine Room Bilges,
3: 50 m.m. Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes YES
 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
 Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks VALVES OR COCKS
 fitted 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
 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
 pass through the bunkers SUCTIONS TO FORWARD SPACES How are they protected PIPE TUNNEL
 pass through the deep tanks NONE Have they been tested as per Rule —
 Piston Rings, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES
 Management 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
 to another YES Is the Shaft Tunnel watertight NONE Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record —) Total Heating Surface of Boilers 315 sq. metres.
 Draft fitted YES No. and Description of Boilers ONE. SCOTCH BOILER. Working Pressure 200 lb.
REPORT ON MAIN BOILERS NOW FORWARDED? YES
DONKEY BOILER FITTED? NO. If so, is a report now forwarded? —
 Are approved plans forwarded herewith for Shafting NO. 28/10/52 Main Boilers NO Auxiliary Boilers NONE Donkey Boilers NONE
 (If not state date of approval) NONE General Pumping Arrangements NO Oil fuel Burning Piping Arrangements NO

ENGINE GEAR. State the articles supplied:—MAIN ENGINE—: 1 BOTTOM END BEARING. 1 ECCENTRIC STRAP. 1 VALVE SPINDLE. 1 TOP END
AND 2 BOLTS. 1 SET H.P. I.P. & L.P. PISTON RINGS. 8 THRUST PADS. 2 MAIN BEARING BOLTS. 1 COMPLETE SET OF METALLIC
FOR EACH H.P. AND I.P. PISTON RODS AND 2 SETS FOR VALVE SPINDLES. 1 SET COUPLING BOLTS. 1 VACUUM GAUGE. 1 PRESS. GAUGE.
TRANS. PUMP—: 1 SLIDE VALVE CHEST COMPLETE. 1 PISTON ROD. 1 SET PISTON RINGS. 1 SET BUCKET RINGS.
BILGE PUMP—: 1 IMPELLER SHAFT. 1 CRANKSHAFT. 8 PISTON RINGS. BILGE PUMP—: 2 BUCKET RINGS. 4 PISTON RINGS.
TRANS. PUMP—: 2 BUCKET RINGS. 4 PISTON RINGS. AIR PUMP—: 4 PISTON RINGS. 1 SET VALVES. FAN ENGINE—: 1 PISTON ROD.
SPINDLE. 2 B.E. BEARINGS. 4 PISTON RINGS. FUEL OIL PUMPS—: 4 SUCTIONS AND 4 DELIVERY VALVES.
ATOR ENGINE—: 1 PISTON ROD. 1 VALVE SPINDLE. 2 B.E. BEARINGS. 4 PISTON RINGS.
ACCESSORIES—: AN ADEQUATE SUPPLY OF BOLTS AND NUTS, PIPE FITTINGS, STEEL BARS, SHEET METAL
FIRE BRICKS, NOZZLE TIPS FOR BURNERS, BOILER TUBES.

The foregoing is a correct description,

Manufacturer.



Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - - -

Total No. of visits

NOT APPLICABLE

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 8/12/52 Thickness of adjusting washers P. 5/8" S. 5/8"

Crank shaft material STEEL Identification Mark 40184 KOM S Thrust shaft material STEEL Identification Mark 40184

Intermediate shafts, material STEEL Identification Marks N° 115. 37. 4s. Tube shaft, material — Identification Mark

Screw shaft, material STEEL Identification Mark 10074 111 B.C. Steam Pipes, material STEEL Test pressure 600 lb Date of Test

Is an installation fitted for burning oil fuel YES Is the flash point of the oil to be used over 150°F. YES

Have the requirements of the Rules for the use of oil as fuel been complied with YES

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with

Is this machinery duplicate of a previous case NOT KNOWN If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c. PLEASE REFER TO SEC'S LETTER SHIP OF 17/

ALSO SECRETARY'S LETTER OF 5-11-46 TO MESSRS WALKER, CRUMP & Co.

The main and auxiliary machinery of this ship were originally built under G. L. survey.

All machinery has been opened up examined and found or placed in good condition. The fittings of all parts checked. The sizes of shafting found to be in accordance with Messrs B. & V. Vulcan's Drawings N° 118 (Yard N° 723/26.30/31) which were approved on 28th October 1946. The sizes of the steam pipes, boiler feed lines, oil fuel lines and pumping arrangements checked found to be in accordance with Messrs Bremer-Vulcan's drawing N° 1761 and 1946 were approved on 31st October 1946, or altered as per Secretary's letter of 5-11-46.

The main and auxiliary steam pipes 3" and over were satisfactorily tested to 600 lb per square inch. (STEAM PIPES ARE OF STEEL.)

The main and auxiliary machinery were tried under steam and found satisfactory.

The machinery of this ship is in a sound and efficient condition and in our opinion is eligible to be classed with record of

Certificate to be sent to THIS OFFICE

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

The amount of Entry Fee ... £	:	:	When applied for,
Special £	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

T. H. Niel and O. V. Baeyens
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

