

REPORT ON OIL ENGINE MACHINERY.

Received at London Office JUN 27 1938

Date of writing Report 12th June 1938 When handed in at Local Office 10.6.1938. Port of Bremen/Augsburg

No. in Survey held at Mannheim Date, First Survey 1st May, 1938 Last Survey 10th June 1938
Reg. Book. Number of Visits 5.

on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel

ENIDTOWN

Tons { Gross 495
Net 485

Built at Deest By whom built Merr. Gebr. v. d. Werf Yard No. 206 When built 1938

Engines made at Mannheim By whom made Merr. Motoren-Werke Mannheim AG Engine No. 41163 When made 1938

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 600 B.H.P. Owners Merr. ~~Handtman~~ Shipping Co. Ltd Port belonging to London

Nom. Horse Power as per Rule 128 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted yes

Trade for which vessel is intended 14 3/4" 21 5/8"

OIL ENGINES, &c.—Type of Engines R. H. 255 Su 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 45 atm. Diameter of cylinders 375 mm Length of stroke 550 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 6.8 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 443 mm. Is there a bearing between each crank yes.
Revolutions per minute 260 Flywheel dia. 1200 mm Weight 2530 kg Means of ignition dir. ign. Kind of fuel used gas oil on test bed.

Crank Shaft, { Solid forged
Semi built dia. of journals as per Rule
All built as fitted Crank pin dia. 225 mm Crank Webs Mid. length breadth 280 mm Thickness parallel to axis
shrink Mid. length thickness 113 mm Thickness around eye hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted

Tube Shaft, 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 shaft 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

Method of reversing Engines by hand gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication Forced

Thickness of cylinder liners 2.5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material water cooled

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No. 1; 11 6/7 Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 1 Diameter 100 mm Stroke 90 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size
How driven

Is the cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Ballast Pumps, No. and size Main Eng. Power-Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1; 5, 7 6/7 rotary type

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces In Pump Room

In Holds, &c.

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 Spaces 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 platform 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

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 50/160 mm Stroke 150 mm Driven by main Engine

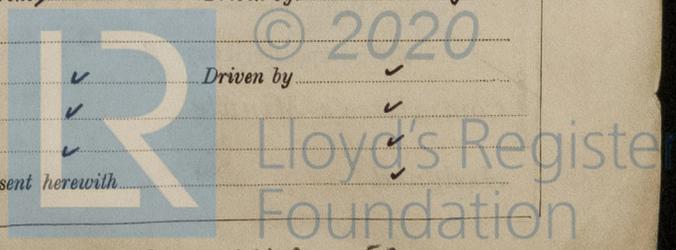
What provision is made for first Charging the Air Receivers

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted No. Position

Have the Auxiliary Engines been constructed under special survey Is a report sent herewith

B.S.B
28-638



AIR RECEIVERS:—Have they been made under survey *yes* State No. of Report or Certificate *Please Certif. attached*
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes*
 Can the internal surfaces of the receivers be examined and cleaned *yes* Is a drain fitted at the lowest part of each receiver *yes*
Tyfon **Injection Air Receivers, No.** *1* Cubic capacity of each *75 lb.* Internal diameter *255,2 mm* thickness *5.9 mm.*
 Seamless, lap welded or riveted longitudinal joint *Seamless* Material *S.M. Steel* Range of tensile strength *56.1 kg/mm²* Working pressure *by Rules 36/38 kg/cm²*
 Actual *30 atm.*
Starting Air Receivers, No. *2* Total cubic capacity *750 lb. each* Internal diameter *568 mm* thickness *16 mm.*
 Seamless, lap welded or riveted longitudinal joint *Lap welded* Material *S.M. Steel* Range of tensile strength *41.3/43.3 kg/mm²* Working pressure *by Rules 36.3 kg/cm²*
 Actual *30 atm.*

IS A DONKEY BOILER FITTED? *✓* If so, is a report now forwarded? *✓*
 Is the donkey boiler intended to be used for domestic purposes only *✓*
PLANS. Are approved plans forwarded herewith for Shafting *crank 31-3-38. letter 24 May 38* Receivers *4-12-36 + 15-1-37* Separate Fuel Tanks *✓*
 (If not, state date of approval)
 Donkey Boilers *✓* General Pumping Arrangements *✓* Pumping Arrangements in Machinery Space *✓*
 Oil Fuel Burning Arrangements *✓*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*
 State the principal additional spare gear supplied

The foregoing is a correct description,

M. Frisch
 VORM. DENZ ABT. STAATSBAU

Manufacturer.

Dates of Survey while building
 During progress of work in shops -- *May 4, 18, 19. June 9, 10,*
 During erection on board vessel -- *✓*
 Total No. of visits *5.*
 Dates of Examination of principal parts—Cylinders *19-5+10-6-38* Covers *18-5+10-6-38* Pistons *10-6-38* Rods *✓* Connecting rods *10-6-38*
 Crank shaft *18-5+10-6-38* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* Tube shaft *✓*
 Screw shaft *✓* Propeller *✓* Stern tube *✓* Engine seatings *✓* Engines holding down bolts *✓*
 Completion of fitting sea connections *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *✓*
 Crank shaft, Material *S.M. Steel* Identification Mark *M.B. 13809 2-5-38* Flywheel shaft, Material *✓* Identification Mark *✓*
 Conn rods, Material *S.M. Steel* Identification Mark *H.B. 20-4-38* Intermediate shafts, Material *✓* Identification Marks *✓*
 Thrust shaft, Material *S.M. Steel* Identification Mark *no 2445/10/17/18/19/20* Screw shaft, Material *✓* Identification Mark *✓*
 Identification Marks on Air Receivers *2 x 750 lb. nos 1328-1329. Lloyd's Test 60 atm. W.P. 30 atm H.K. 9-4-38 (Start air)*
1 x 75 lb. no 999 Lloyd's Test 854 lb. W.P. H 27 lbs. V.S. 4-10-37 (Tyfon vessel)

Is the flash point of the oil to be used over 150° F. *✓*
 Have the requirements of the Rules for oil fuel pipes and tank fittings 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.) *This Heavy Oil Main Engine has been constructed under special survey in compliance with the approved plans, the Secretary's letters and instruction thereto and otherwise in conformity with the Society's Rules and Regulations. The materials used in the construction are of good quality and made at works recognized by the Committee and tested by the local Society's Surveyors with satisfactory results. This Heavy Oil Main Engine has been tested running several hours on the makers test bed under full-overload- and partly loads and was found to work satisfactorily. In our opinion, the vessel for which this Heavy Oil Main Engine is intended will be eligible for the notation of +H.M.C. (with date) when the whole machinery has been satisfactorily fitted onboard of the vessel and tried under full working condition*

The amount of Entry Fee	<i>4/5 £ 48.00</i>	When applied for,	
Special	<i>4/5 £ 512.00</i>		<i>25.6. 1938.</i>
Donkey Boiler Fee	<i>£ 63.00</i>	When received,	
Travelling Expenses (if any)	<i>£ 115.00</i>		<i>20.7. 1938</i>

M. Schneider. H. Petersen.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI 14 OCT 1938*
 Assigned *See minute on H. Mack*



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