

REPORT ON OIL ENGINE MACHINERY

No. 87042

18 APR 1931

Received at London Office

NEWCASTLE-ON-TYNE

Date of writing Report

19

When handed in at Local Office

16th April 1931. Port of

Date, First Survey

21st May 1930

Last Survey

16th April 1931

Number of Visits

Gross 7910
Net 4719

No. in Survey held at Reg. Book.

90379 on file

Newcastle

Date, First Survey

Last Survey

Built at Walker

By whom built S.W.G. Armstrong Whitworth & Co. (Shipbuilders) Ltd. Yard No. 1068. When built 1931.

Engines made at Sertwood

By whom made S.W.G. Armstrong Whitworth & Co. (Engines) Ltd. Engine No. 96. When made 1931.

Donkey Boilers made at Sertwood

By whom made S.W.G. Armstrong Whitworth & Co. (Engines) Ltd. Boiler No. 96. When made 1931.

Brake Horse Power 3300

Owners Carl Beech

Port belonging to Tvedstrand

Nom. Horse Power as per Rule 776

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

Trade for which vessel is intended

Ocean Going

OIL ENGINES, &c.—Type of Engines

Armstrong Sulzer 2 or 4 stroke cycle 2. Single or double acting Single
Maximum pressure in cylinders 500 lbf/sq. in. Diameter of cylinders 600 in. Length of stroke 1060 in. No. of cylinders 8. No. of cranks 8.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 860 in. Is there a bearing between each crank Yes

Revolutions per minute 125 Flywheel dia. 2075 in. Weight 4.6 tons Means of ignition Compression Kind of fuel used Crude oil

Crank Shaft, dia. of journals as per Rule 403 in. as fitted 420 in. Crank pin dia. 420 in. Crank Webs Mid. length breadth 500 in. Thickness parallel to axis 500 in. Mid. length thickness 230 in. Thickness around eye-hole Solid

COMPRESSOR Shaft, diameter as per Rule as fitted 285 in. Intermediate Shafts, diameter as per Rule 12.03 in. as fitted 18.75 in. Thrust Shaft, diameter at collar as per Rule 403 in. as fitted 420 in.

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 13.28 in. as fitted 13.75 in. Is the screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule as fitted .675 in. Thickness between bushes as per Rule as fitted .654 in. Is the after end of the liner made watertight in the propeller boss Yes

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

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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No

Length of Bearing in Stern Bush next to and supporting propeller 4'-9"

Propeller, dia. 15'-0" Pitch 11'-3" No. of blades 4. Material Bronze whether Moveable Solid Total Developed Surface 80 sq. feet

Method of reversing Engines Sewo motor Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication Forced

Thickness of cylinder liners 20 in. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

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

Cooling Water Pumps, No. Three Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 6" Stroke 13 3/4" Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size Two one @ 8" x 9" x 12" & one @ 10 1/2" x 14" x 24" How driven Steam

Ballast Pumps, No. and size One @ 10 1/2" x 14" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size Two @ 6 1/2" x 9" x 12" & 7 1/2" x 13"

Are two independent means arranged for circulating water through the Oil Cooler None fitted Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces Two @ 3 1/2" dia. Two @ 2 1/2" dia. Two @ 5" dia.

In Holds, &c. Fore Peak 3" dia. After Peak 4" dia. For Cofferdam 4" dia. After Cofferdam 4" dia. Hold 2 @ 2" dia.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One @ 5" dia.

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes

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 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 platform 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 Yes

What pipes pass through the bunkers None

How are they protected

What pipes pass through the deep tanks

Have they been tested as per Rule Yes

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

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined Yes

What means are provided for cleaning their inner surfaces Manhole

Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. 4 @ 1000 lbs. Cubic capacity of each 8.4 c.ft. Internal diameter 470 in. thickness 27.5 in.

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 28-32 tons

Starting Air Receivers, No. 2 @ 425 lbs. Total cubic capacity 540 c.ft. Internal diameter 5'-0" thickness 7/16 3 1/2 180 lbs. 437 lbs.

Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 28-32 tons

DONKEY BOILERS FITTED?

Yes.

If so, is a report now forwarded?

Yes.

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval)

Yes.

Receivers

Yes.

Separate Tanks

Yes.

Donkey Boilers

Yes.

General Pumping Arrangements

Yes.

Oil Fuel Burning Arrangements

Yes.

SPARE GEAR 1 cyl cover complete with all valves etc & one complete set of valves for one cylinder & rings etc, fuel needle valves for half the number of cylinders, 1 piston complete with all piston rings, studs & nuts, 1 set of piston rings for 1 piston, 2 telescopic cooling pipes for one piston, 1 set of skew wheels for cam shaft drive, 1 set of studs & nuts for one cyl cover, 2 crosshead bearing bolts & nuts, 2 crank pin bearing bolts & nuts, 1 set of bolts for crank shaft coupling, 1 set of bolts for the intermediate shaft coupling, 2 cyl liners, 1 hr of main bearing brasses, 1 piston head, skirt & rod. Main & aux Compressor & Pumps. 1 set of piston rings for each compressor piston, 1 half set of suction & delivery valves for each stage, 2 bottom end bolts for main compressor, 10 of suction & delivery valves, 2 bottom end & 2 top end bolts for scavenge air pump, 1 set of piston rings, valve & seat etc for each stage of aux compressor, all working parts for one fuel pump. Auxiliary Pumps 1 such & one del valve for the oil fuel transfer pump, 1 suction & one delivery valve for bilge pump, a quantity of assorted bolts & nuts, a length of pipe of each size used for the fuel delivery & injection air pipes & the air delivery from main & aux compressors to receivers with unions & flanges suitable for each.

The foregoing is a correct description,

FOR

W. & A. JAMESON NEWCASTLE & COMPANY (ENGINEERS) LIMITED

Manufacturer.

W. & A. Jameson

1930
 Dates of Survey while building
 During progress of work in shops - May 21, June 13, 16, 18, 19, July 1, 4, 7, 15, 18, 23, 24, 28, Aug 5, 11, 15, 20, 22, 25, 26, Sep 4, 5, 12, 16, 17, 19, 24, 25, 26, 29, 30, Oct 1, 2, 3, 4, 6, 8, 10, 13, 14, 16, 20, 21, 22, 23, 24, 26, 28, 29, 30, 31, Nov 3, 4, 5, 6, 7, 11, 12, 13, 14, 16, 18, 19, 21, 25, 27, 28, Dec 1, 2, 3, 4, 5, 8, 9, 12, 16, 17, 18, 19, 22, 29, 30, 31, 1931 Jan 5, 8, 9, 12, 16, 22, 23, 26, 27, 28, 30, Feb 2, 4, 6, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 23, 24, 25, 27, Mar 2, 3, 5, 8, 12, 13, 19, Apr 16.
 Total No. of visits 119.

Dates of Examination of principal parts - Cylinders 14.11.30 Covers 8.12.30 Pistons 15.11.30 Rods 26.8.30 Connecting rods 28.11.30
 Crank shaft 3.11.30 COMPRESSOR Flywheel shaft 8.11.30 FLYWHEEL Thrust shaft 12.11.30 Intermediate shafts 12.11.30 Tube shaft ✓
 Screw shaft 23.12.30 Propeller 1.12.30 Stern tube 4.12.30 Engine seatings 4.12.30 Engines holding down bolts 23.1.30
 Completion of fitting sea connections 18.12.30 Completion of pumping arrangements 3.3.31. Engines tried under working conditions 5.3.31.
 Crank shaft, Material Steel Identification Mark 8505 & 8506. COMPRESSOR Flywheel shaft, Material Steel Identification Mark 8507.
FLYWHEEL Thrust shaft, Material Steel Identification Mark 1816 Intermediate shafts, Material Steel Identification Marks 1986.
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material Steel Identification Mark 1927.

Is the flash point of the oil to be used over 150° F. Yes.
 Is this machinery duplicate of a previous case Yes. If so, state name of vessel M.V. "ATTILA" Nuc R/R No 86497.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery has been built under Special Survey and in accordance with the Society's Rules & approved plans. The materials & workmanship are sound and good. The machinery was efficiently installed on board, tested & manoeuvred on completion under working conditions and found satisfactory. The machinery of this vessel is eligible in my opinion to be classed and to have the notation of "Oil Engine" and records of + LMC 4,31 and TS Cl.

The amount of Entry Fee ... £ 6 : -
 Special ... £ 113 : 16
 Donkey Boiler Fee ... £ 22 : 16
 AIR RECEIVERS
 The following expenses (if any) £ 6 : 6

When applied for, 17 APR 1931

When received, 30.4.1931

L. Peckett.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned + L.M.C. 4,31 C.L.
 Oil Eng. 288.150lb.
 CERTIFICATE WRITTEN.

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

