

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 2548

Received at London Office 14 MAR 1925

REMARKS.

Date of writing Report 9 March 1925 When handed in at Local Office 19 Port of Stockholm

No. in Survey held at Sickla Skm Distr Date, First Survey 2 Nov 1924 Last Survey 4 March 1925
 Reg. Book. Single } Screw vessels 5 Tons } Gross
Twin }
Triple } Net

Master _____ Built at _____ By whom built _____ Yard No. _____ When built _____

Engines made at Stockholm By whom made Aktieb Atlas Diesel Engine No. 40468 When made 1925

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

Brake Horse Power 65 Owners Swan, Hunter & Wigham Richardson Port belonging to Newcastle

Nom. Horse Power as per Rule 9 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

OIL ENGINES, &c.—Type of Engines Stationary Diesel Oil Engine (Type MT2) 4 stroke cycle Single or double acting _____

Maximum pressure in cylinders 35 kg/cm² No. of cylinders 2 No. of cranks 2 Diameter of cylinders 250 mm

Length of stroke 370 mm Revolutions per minute 300 Means of ignition Diesel Kind of fuel used Crude oil

Is there a bearing between each crank yes Span of bearings (Page 32, Section 2, par. 7 of Rules) 3 1/2 mm

Distance between centres of main bearings 600 mm Is a flywheel fitted yes Diameter of crank shaft journals 141 mm as per Rule
145 mm as fitted

Diameter of crank pins 125 Breadth of crank webs 187 mm as per Rule 79 mm as per Rule
210 mm as fitted 82 mm as fitted

Diameter of flywheel shaft _____ Diameter of tunnel shaft _____ Diameter of thrust shaft _____
 as per Rule as fitted as per Rule as fitted as per Rule as fitted

Diameter of screw shaft _____ Is the screw shaft fitted with a continuous liner the whole length of the stern tube _____
 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 joints burned _____

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 _____ If without liners, is the shaft arranged to run in oil _____

Type of outer gland fitted to stern tube _____ Length of stern bush _____ Diameter of propeller _____

Pitch of propeller _____ No. of blades _____ state whether moveable _____ Total surface _____ square feet

Method of reversing ✓ Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Thickness of cylinder liners 25 mm

Are the cylinders fitted with safety valves yes Means of lubrication pumps Are the exhaust pipes and silencers water cooled or lagged with non-conducting material _____
 If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine _____

No. of cooling water pumps _____ Is the sea suction provided with an efficient strainer which can be cleared within the vessel _____

No. of bilge pumps fitted to the main engines _____ Diameter of ditto _____ Stroke _____

Can one be overhauled while the other is at work _____ No. of auxiliary pumps connected to the main bilge lines _____ How driven _____

Sizes of pumps _____ No. and sizes of suction connections to both main bilge pumps and auxiliary bilge pumps:—In engine room _____
 and in holds, etc. _____ No. of ballast pumps _____ How driven _____ Sizes of pumps _____

Is the ballast pump fitted with a direct suction from the engine room bilges _____ State size _____ Is a separate auxiliary pump suction fitted in Engine Room and size _____
 Are all the bilge suction pipes fitted with roses _____ Are the roses in Engine Room always accessible _____

Are the sluices on Engine Room bulkheads always accessible _____ Are all connections with the sea direct on the skin of the ship _____

Are they valves or cocks _____ Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates _____

Are the discharge pipes above or below the deep water line _____ Are they each fitted with a discharge valve always accessible on the plating of the vessel _____

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times _____ Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges _____ Is the screw 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 _____

No. of main air compressors 1 No. of stages 2 Diameters 155 mm 115 mm Stroke 45 Driven by engine

No. of auxiliary air compressors _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____

No. of small auxiliary air compressors _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____

No. of scavenging air pumps none fitted Diameter _____ Stroke _____ Driven by _____

Diameter of auxiliary Diesel Engine crank shafts _____ Are the air compressors and their coolers made so as to be easy of access _____
 as per Rule as fitted

AIR RECEIVERS:—No of high pressure air receivers 1 Internal diameter 240 mm Cubic capacity of each 25 litres

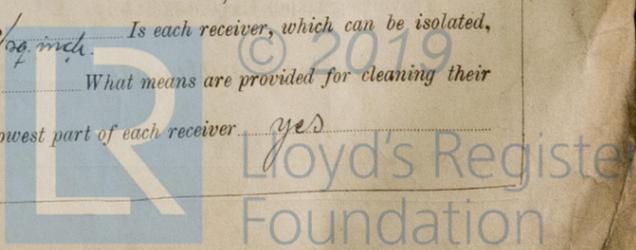
material S.M. Steel Seamless, lap welded or riveted longitudinal joint lap welded Range of tensile strength minimum 23 tons sq. inch.

thickness 15.5 mm working pressure by Rules 1024 lbs/sq. inch. No. of starting air receivers 1 Internal diameter 300 mm

Total cubic capacity 96 litres Material S.M. Steel Seamless, lap welded or riveted longitudinal joint lap welded

Range of tensile strength min 23 tons thickness 18.5 mm Working pressure by rules 1020 lbs/sq. inch. 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 yes What means are provided for cleaning their inner surfaces mudhole 120 mm Is there a drain arrangement fitted at the lowest part of each receiver yes

W351-0015



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	(The cylinder liners are more than 1/5 of the cylinder diam.)				
" " COVERS	4.3.25		4 kg	LLOYD'S TEST 4 kg AI 4.3.25 A	
" " JACKETS			ditto	ditto	
" " PISTON WATER PASSAGES	(open pistons)				
MAIN COMPRESSORS—1st STAGE	4.3.25	10 kg	20 kg	A	
" 2nd "	4.3.25	70 kg	140 kg		
" 3rd "					
AIR RECEIVERS—STARTING	20.2.25.	70 kg	140 kg	No 5296 LLOYD'S TEST 140 kg W.P. 70 kg AI 20.2.25 A	
" INJECTION	20.2.25.	ditto	ditto		
AIR PIPES	4.3.25.	70 kg	140 kg	No 5297 LLOYD'S TEST 140 kg W.P. 70 kg AI 20.2.25 A	
FUEL PIPES	4.3.25	ditto	ditto		
FUEL PUMPS	4.3.25.	ditto	ditto	A	
SILENCER	(none ordered)				
" WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *See Secret. letter E17.7.23* Receivers *E17.7.23* Separate Tanks

SPARE GEAR as per list, approved on the 17th July 1923, will be inspected when machinery is being fitted in ship.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building: During progress of work in shops - 2/11, 15/12, 21/1; 20 & 28/2, 4/3.25
During erection on board vessel -
Total No. of visits in shop 5

Dates of Examination of principal parts—Cylinders 28/2, 4/3.25 Covers 28/2, 4/3.25 Pistons 4/3.25 Rods Connecting rods 15/12, 24/3.25
Crank shaft 2/11, 24/3.25 Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings
Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions in shop 28.2.25

Completion of fitting sea connections Stern tube Screw shaft and propeller
Material of crank shaft *S.M. Steel* Identification Mark on Do. *LLOYD'S No 7361 2.11.24 V3 A* Material of thrust shaft Identification Mark on Do.
Material of tunnel shafts Identification Marks on Do. Material of screw shafts Identification Marks on Do.

Is the flash point of the oil to be used over 150° F.
Is this machinery duplicate of a previous case *yes* If so, state name of vessel *see Shm. report no. 2377*

General Remarks (State quality of workmanship, opinions as to class, &c.)
I am of opinion that this engine is of superior material and workmanship, and as it has been designed and constructed under Special Survey, I have respectfully to submit that it be approved as auxiliary to the main engine.

Certificate (if required) 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 ...	£ 12 : 0 : 0	When applied for,
Special ...	£ : : :	
Donkey Boiler Fee ...	£ : : :	When received,
Travelling Expenses (if any) Total	£ 1 : 1 : 0	
	13 : 1 : 0	

Committee's Minute

Assigned

See Nwc 26 79675

K. J. Andersson
Acting Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 13 OCT 1925

