

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

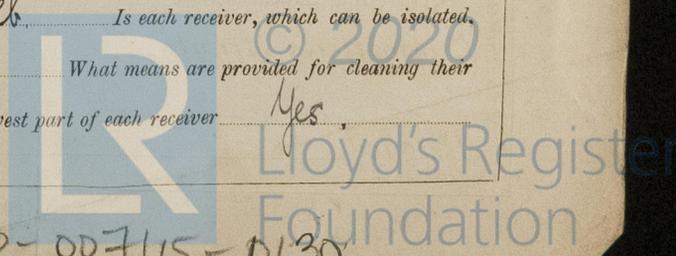
No. 2311.
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Date of writing Report 26th June 1923 When handed in at Local Office Stockholm Port of Stockholm
 No. in Survey held at Stockholm Date, First Survey 17th Jan. Last Survey 19th June 1923
 Reg. Book. C. 21 Number of Visits 10
 on the Single } Screw vessels
Twin }
Triple }
 Master Built at Stockholm By whom built J. & C.G. Bolander's Co. Ltd. Yard No. 15196/99 When built
 Engines made at Stockholm By whom made J. & C.G. Bolander's Co. Ltd. Engine No. When made 1923
 Donkey Boilers made at By whom made Boiler No. When made
 Brake Horse Power 160 Owners Astilleros de Jarragona S.A. Port belonging to Jarragona
(Mollers order No. 202.)
 Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

OIL ENGINES, &c.—Type of Engines Bolinder Oil Engine 2 or 4 stroke cycle Single or double acting
 Maximum pressure in cylinders 17 Kg./sq. cm. No. of cylinders 4 No. of cranks 4 Diameter of cylinders 300 mm
 Length of stroke 310 mm Revolutions per minute 350 Means of ignition hot bulb Kind of fuel used Crude oil
 Is there a bearing between each crank Yes Span of bearings (Page 87, Section 3, par. 1 of Rules) 600 mm
 Distance between centres of main bearings 600 mm Is a flywheel fitted Yes Diameter of crank shaft journals 121 mm as per Rule
 as fitted 128 mm
 Diameter of crank pins 128 mm Breadth of crank webs 161 mm as per Rule Thickness of ditto 68 mm as per Rule
The flywheel is fitted at fore end of the crankshaft as fitted 170 mm as fitted 71.5 mm
 Diameter of flywheel shaft as per Rule Diameter of tunnel shaft as per Rule Diameter of thrust shaft 116 mm as per Rule
 as fitted as fitted 118 mm as fitted
 Diameter of screw shaft as per Rule Is the screw shaft fitted with a continuous liner the whole length of the stern tube
 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 Timing Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners None fitted
 Are the cylinders fitted with safety valves No Means of lubrication rumps 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 2 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 1 Diameter of ditto 100 mm Stroke 50 mm
 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 suctions connected 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

IR RECEIVERS:—No of high pressure air receivers Internal diameter Cubic capacity of each
 material Seamless, lap welded or riveted longitudinal joint Range of tensile strength
 thickness working pressure by Rules No. of starting air receivers 1 Internal diameter 434 mm
 Total cubic capacity 280 litres Material S. M. Steel Seamless, lap welded or riveted longitudinal joint lapwelded
 Range of tensile strength min. 23 tons/sq. inch thickness 8 mm Working pressure by rules 257 lb 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 door Is there a drain arrangement fitted at the lowest part of each receiver Yes



IS A DONKEY BOILER FITTED?

HYDRAULIC TESTS:--

a report now forwarded?

DESCRIPTION.	TEST	REMARKS.
ENGINE CYLINDERS	7.6.23	7 kg/sq
" " COVERS	7.6.23	
" " JACKETS	7.6.23	3.5 kg/sq
" PISTON WATER PASSAGES	(Open pistons)	
MAIN COMPRESSORS—1st STAGE		
" 2nd "	none fitted	
" 3rd "		
AIR RECEIVERS—STARTING	7.6.23	15 kg/sq. Cm. 30 kg/sq. Cm.
" INJECTION		No. 2238 LLOYD'S TEST. 30 Kg. W.P. 15 Kg. A.I. 7.6.23. A
AIR PIPES		
FUEL PIPES		
FUEL PUMPS		
SILENCER	7.6.23	3.5 kg/sq. cm
" WATER JACKET	7.6.23	ditto
SEPARATE FUEL TANKS		Hydr. Test. 3.5 Kg. A.I. 7.6.23. A

PLANS. Are approved plans forwarded herewith for shafting (If not, state date of approval) Secretary's letter E. 7. 11 22. Receivers Starting E. 8.3.16 Separate Tanks

SPARE GEAR to be supplied & inspected on delivery

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building	During progress of work in shops --	17. 20. 21, 6, 16, 21 + 26, 4, 7, 4 19 1923
	During erection on board vessel --	2, 6
Total No. of visits		10 in shop
Dates of Examination of principal parts	Cylinders	4.7 23
	Covers	4.7 23
	Pistons	4.7 23
	Rods	
	Connecting rods	31, 16, 26, 7 23
	Crank shaft	20, 6, 7 23
	Thrust shaft	7, 16, 21, 7 23
	Tunnel shafts	
	Screw shaft	
	Propeller	
	Stern tube	
	Engine seatings	
Engines holding down bolts	Completion of pumping arrangements	Engines tried under working conditions in shop 4.6.23
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. 3234 A.I. 6.2-23. H
Material of thrust shaft	S.M. Steel	Identification Mark on Do. LLOYD'S No. 3233 A.I. 16.2-23. A
Material of tunnel shafts	Identification Marks on Do.	Material of screw shafts
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 Skm. Report. no. 2247.

General Remarks (State quality of workmanship, opinions as to class, &c.)

I am of opinion, that this motor is of superior material & workmanship, as it has been designed & constructed under my special survey, I have respectfully to submit, that it will be eligible to be classed + LMC as soon as it has been fitted in a classed vessel to the satisfaction of the Society's Surveyors.

The amount of Entry Fee ... £	:	:	When applied for,
Special Survey in shop ... £	12-0-0	:	22 June 1923
Donkey Boiler Fed ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	June 1923

(Signed) A. Jackson
Engineer Surveyor to Lloyd's Register of Shipping.
Assisted by Mr. K. J. Anderson.

Committee's Minute TUES. 2 MAR 1926
Assigned See Bel B. 11 2628

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

