

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 2311.

-1 MAR 1920

Date of writing Report 26th June 1923 When handed in at Local Office

Port of Stockholm

No. in Survey held at Stockholm

Date, First Survey 17th Jan. Last Survey 19th June 1923Reg. Book. on the Single }
Twin } Screw vessels
Triple }

Number of Visits

Tons }
Gross
Net

Master Built at Engines made at Stockholm By whom made J. & C. G. Bolander's Co. Ltd. Yard No. 15196/99 When built 1923
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 160 Owners Astilleros de Iarragona S.A. (Molinos order No. 202.) Port belonging to Iarragona
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 8, par. 1 of Rules) 600 mm
Distance between centres of main bearings 600 mm Is a flywheel fitted yes Diameter of crank shaft journals as per Rule 121 mm
as fitted 128 mm
Diameter of crank pins 128 mm Breadth of crank webs as per Rule 161 mm Thickness of ditto as per Rule 68 mm
as fitted 170 mm as fitted 71.5 mm
Diameter of flywheel shaft as per Rule 116 mm
as fitted 118 mm
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
Are the cylinders fitted with safety valves no 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 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
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 none fitted No. of stages Diameters Stroke Driven by
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 Diameter Stroke Driven by
Diameter of auxiliary Diesel Engine crank shafts as per Rule Are the air compressors and their coolers made so as to be easy of access
as fitted

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 Internal diameter 434 mm
Total cubic capacity 280 litres Material S. M. Steel Seamless, lap welded or riveted longitudinal joint lap welded
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

007100-007115-0130

IS A DONKEY BOILER FITTED?

HYDRAULIC TESTS:—

DESCRIPTION.	TEST	REMARKS.
ENGINE CYLINDERS	7. 6. 23.	37 kg/sq.
" " COVERS	7. 6. 23.	3.5 kg/sq.
" " JACKETS	7. 6. 23.	3.5 kg/sq.
" PISTON WATER PASSAGES	(Open pistons)	
MAIN COMPRESSORS—1st STAGE		
" 2nd "		
" 3rd "		
AIR RECEIVERS—STARTING	7. 6. 23.	15 kg/sq. Cm. 30 kg/sq. Cm.
" INJECTION		
AIR PIPES		
FUEL PIPES		
FUEL PUMPS		
SILENCER	7. 6. 23.	3.5 kg/sq. cm.
" WATER JACKET	7. 6. 23.	ditto
SEPARATE FUEL TANKS		

No. 2238
LLOYD'S TEST.
30 Kg.
W.P. 15 Kg.
A.I. 7. 6. 23. A

Hydr. Test. 3.5 Kg.
A.I. 7. 6. 23. A

PLANS. Are approved plans forwarded herewith for shafting
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. 19 1923.
	During erection on board vessel - -	2
	Total No. of visits	10 in shop
Dates of Examination of principal parts—Cylinders	4. 7. 23.	Covers 4. 7. 23.
Crank shaft	20. 6. 7. 23.	Pistons 4. 7. 23.
Thrust shaft	7. 16. 21, 7. 23.	Rods
Tunnel shafts		Connecting rods 31, 16. 26, 7. 23.
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		
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		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 ... £ :
Special Survey in ... £ : 12.0.0
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, 22 June 1923
When received, 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. H. 2628



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