

of writing Report *24 May* 19*23*. When handed in at Local Office *19* Port of *Stockholm*
in Survey held at *Stockholm* Date, First Survey *16 Jan.* Last Survey *19 May* 19 *23*
Book. Number of Visits *6*
on the Single } Screw vessels *C. 18*
Twin }
Triple } Tons { Gross
ster Built at By whom built Yard No. When built
ines made at *Stockholm* By whom made *J & C G Bolander's Co Ltd.* Engine No. *15184/87* When made *1923*
key Boilers made at By whom made Boiler No. When made
ke Horse Power *160* Owners *Astilleros de Gijón* Port belonging to *Gijón*
(Möllers order no 198)
r. Horse Power as per Rule *46* Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c. —Type of Engines		<i>Cylinder Oil Engine</i>	2 or 4 stroke cycle		Single or double acting
Maximum pressure in cylinders		<i>17 kg/cm²</i>	No. of cylinders	<i>4</i>	Diameter of cylinders
Pitch of stroke		<i>310 m.m.</i>	Revolutions per minute	<i>350</i>	Means of ignition
				<i>hot bulb</i>	Kind of fuel used
Is there a bearing between each crank		<i>yes</i>	Span of bearings (Page <i>87</i> , Section <i>3</i> , par. <i>4</i> of Rules)		<i>600 m.m.</i>
Distance between centres of main bearings		<i>600 m.m.</i>	Is a flywheel fitted		<i>yes</i>
Diameter of crank pins		<i>128</i>	Breadth of crank webs		<i>as per Rule 161 m.m. as fitted 170 " "</i>
Is flywheel fitted at fore end of the crank shaft			Thickness of ditto		<i>as per Rule 68 m.m. as fitted 71.5 " "</i>
Diameter of flywheel shaft		<i>as per Rule as fitted</i>	Diameter of tunnel shaft		<i>as per Rule as fitted</i>
Diameter of screw shaft		<i>as per Rule as fitted</i>	Diameter of thrust shaft		<i>as per Rule as fitted</i>
Is after end of the liner made watertight in the propeller boss			Is the screw shaft fitted with a continuous liner the whole length of the stern tube		
If 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 without liners, is the shaft arranged to run in oil		
Are liners fitted, is the shaft lapped or protected between the liners			Length of stern bush		Diameter of propeller
Is outer gland fitted to stern tube			No. of blades		Total surface
Is propeller			state whether moveable		square feet
Is reversing		<i>Turning</i>	Is a governor or other arrangement fitted to prevent racing of the engine when declutched		<i>yes</i>
Are cylinders fitted with safety valves		<i>no</i>	Means of lubrication		<i>pumps</i>
Is conducting material			Are the exhaust pipes and silencers water cooled or lagged with		
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		<i>2</i>
Is the sea suction provided with an efficient strainer which can be cleared			Diameter of ditto		<i>100 m.m.</i>
Can the vessel			Stroke		<i>50 m.m.</i>
Can be overhauled while the other is at work			No. of bilge pumps fitted to the main engines		<i>1</i>
No. of auxiliary pumps connected to the main bilge lines			How driven		
No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps :—In engine room			No. of ballast pumps		
How driven			Sizes of pumps		
Is ballast pump fitted with a direct suction from the engine room bilges			State size		
Is a separate auxiliary pump suction fitted in			Room and size		
Are all the bilge suction pipes fitted with roses			Are the roses in Engine Room always accessible		
Are sluices on Engine Room bulkheads always accessible			Are all connections with the sea direct on the skin of the ship		
Are valves or cocks			Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates		
Are 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 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			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		<i>none fitted</i>
No. of stages			Diameters		
Stroke			Driven by		
Auxiliary air compressors			Diameters		
Stroke			Driven by		
Small auxiliary air compressors			Diameters		
Stroke			Driven by		
Scavenging air pumps			Diameter		
Stroke			Driven by		
Are the air compressors and their coolers made so as to be easy of access			As per Rule		
As fitted					

RECEIVERS:—No of high pressure air receivers..... Internal diameter..... Cubic capacity of each.....

Seamless, lap welded or riveted longitudinal joint..... Range of tensile strength.....

working pressure by Rules..... No. of starting air receivers..... Internal diameter 434 mm.

Cubic capacity 280 litres..... Material S.M. Steel..... Seamless, lap welded or riveted longitudinal joint lap welded

Tensile strength min. 23 tons/inch. thickness 8 mm. Working pressure by rules 257 lbs..... Is each receiver, which can be isolated.

Has a safety valve as per Rule..... Can the internal surfaces of the receivers be examined yes..... What means are provided for cleaning their

surfaces manhole door..... Is there a drain arrangement fitted at the lowest part of each receiver. yes.....

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	19.5.23	17 kg/ sq. cm.	37 kg/ sq. cm.	LLOYD'S TEST 37 kg AI 19.5.23 A	
" " COVERS	19.5.23	ditto	ditto		
" " JACKETS.....	19.5.23		3.5 kg/ sq. cm.		
" PISTON WATER PASSAGES.....	(open pistons)				
MAIN COMPRESSORS—1st STAGE.....					
" 2nd "	none fitted				
" 3rd "					
AIR RECEIVERS—STARTING	19.5.23	15 kg/ sq. cm.	30 kg/ sq. cm.	No. 2235 LLOYD'S TEST 30 kg W.P. 15 kg AI 19.5.23 A	
" INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER	19.5.23	—	3.5 kg/ sq. cm.	HYDR. TEST 3.5 kg AI 19.5.23 A	
" WATER JACKET	19.5.23		ditto.		
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *Secretary's letter* *E 7.11.22*
(If not, state date of approval)

Receivers starting *E 8.3.16* Separate Tanks ✓

SPARE GEAR *to be supplied and inspected on delivery*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *16.8.23, 2.9.23, 16.10.23*
 { During erection on board vessel - - }
 Total No. of visits *6 in shops*

Dates of Examination of principal parts—Cylinders *16.10.23* Covers *16.10.23* Pistons *16.10.23* Rods Connecting rods *16.10.23*
 Crank shaft *16.10.23* Thrust shaft *16.10.23* Tunnel shafts Screw shaft Propeller Stern tube Engine seatings
 Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions *in shops 16.10.23*

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. 3229 AI 2.2.23 A* Material of thrust shaft *S.M. Steel* Identification Mark on Do. *LLOYD'S No. 3230 AI 2.2.23 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 Ship 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 and workmanship, and as it has been designed and 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 shops. £ *12:0:0* *24 May 1923*
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : *June 1923*

Committee's Minute *TUES. 2 MAR 1926*

Assigned

See Rec. & rpt 2625.

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