

REPORT ON OIL ENGINE MACHINERY.

No. 2606

Date of writing Report *21st Aug 1925* When handed in at Local Office *19* Port of *Stockholm*
 No. in Survey held at *Sickla, Skm. distr.* Date, First Survey *11 Oct. 1923* Last Survey *10 Aug. 1925*
 Reg. Book. *Single* on the *Twin* Screw vessels *(not yet named)* Number of Visits *6*
 Master *Gothenburg* Built at *Gothenburg* By whom built *Attebelaget Lindholmen* No. *923* When built *1925*
 Engines made at *Stockholm* By whom made *Attebel. Atlas-Diesel* Engine No. *40453* When made *1925*
 Donkey Boilers made at *Gothenburg* By whom made *Gothenburg* Boiler No. *Gothenburg* When made *Gothenburg*
 Brake Horse Power *100* Owners *A.B. Svenska Okeaniska Kompaniet* Port belonging to *Gothenburg*
 Nom. Horse Power as per Rule *25* Is Refrigerating Machinery fitted for cargo purposes *Is Electric Light fitted*

L ENGINES, &c.—Type of Engines *Stationary Diesel Oil Engine (type MT.2K) 2 or 4 stroke cycle* Single or double acting *Single*
 Maximum pressure in cylinders *35 kg/cm²* No. of cylinders *2* No. of cranks *2* Diameter of cylinders *290 mm.*
 Length of stroke *1430 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 92, Section 2, par. 7 of Rules) *397 mm.*
 Distance between centres of main bearings *689 mm.* Is a flywheel fitted *yes* Diameter of crank shaft journals *as per Rule 163.4 mm.*
 Diameter of crank pins *165 mm.* Breadth of crank webs *as per Rule 217 mm.* Thickness of ditto *as per Rule 91.5 mm.*
(The flywheel is fitted on the crank shaft) *as fitted 260 - - - as fitted 95.0 - - -*
 Diameter of flywheel shaft *as per Rule* Diameter of tunnel shaft *as per Rule* Diameter of thrust shaft *as per Rule*
 Diameter of screw shaft *as fitted* Is the screw shaft fitted with a continuous liner the whole length of the stern tube
 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
 Does the liner do 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
 Are two liners are fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil
 Is the outer gland fitted to stern tube Length of stern bush Diameter of propeller
 Is the propeller No. of blades state whether moveable Total surface square feet
 Is the method of reversing Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Thickness of cylinder liners *28 mm.*
 Are the cylinders fitted with safety valves *yes* Means of lubrication *pumps* Are the exhaust pipes and silencers water cooled or lagged with
 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 *1* Is the sea suction provided with an efficient strainer which can be cleared
 Is the vessel No. of bilge pumps fitted to the main engines Diameter of ditto Stroke
 Is one to be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines How driven
 Is the No. of pumps No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room
 Is 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
 Is the 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 the key 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
 Is the communication between the sea and the bilges Is the screw shaft tunnel watertight Is it fitted with a watertight door
 Is the vessel 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 *155/45 mm.* Stroke *180 mm.* 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
 Are scavenging air pumps *none fitted* Diameter Stroke Driven by
 Is the 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

RECEIVERS:—No. of high pressure air receivers *1* Internal diameter *240 mm.* Cubic capacity of each *25 litres*
 Is the receiver *S.M. Steel* Seamless, lap welded or riveted longitudinal joint *lap welded* Range of tensile strength *min 23 tons*
 Is the thickness *15.5 mm.* working pressure by Rules *1024 lb/sq. inch* No. of starting air receivers *1* Internal diameter *300 mm.*
 Is the cubic capacity *96 litres* Material *S.M. Steel* Seamless, lap welded or riveted longitudinal joint *lap welded*
 Is the thickness *18.5 mm.* Working pressure by rules *1020 lb/sq. inch* Is each receiver, which can be isolated,
 Is the receiver 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
 Are the surfaces *mud hole 120 mm.* 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	(The thickness of the cylinder liners is more than $\frac{1}{15}$ of the cylinder diam.) 24.4.25.	—	4 kg/cm ²	LLOYD'S TEST 4 kg. AI 24.4.25 A	
" " COVERS water passages	24.4.25.	—	ditto	ditto	
" " JACKETS.....	(open pistons) 24.4.25.	10 kg/cm ²	20 kg/cm ²	A	
" " PISTON WATER PASSAGES.....	24.4.25.	70 —	140 —		
MAIN COMPRESSORS—1st STAGE.....	24.4.25.	70 kg/cm ²	140 kg/cm ²	No 5310 LLOYD'S TEST 140 kg. WP 70 kg. AI 24.4.25 A	
" 2nd "	—	—	—		
" 3rd "	24.4.25.	70 kg/cm ²	140 kg/cm ²		
AIR RECEIVERS—STARTING	"	"	"	No 5311 LLOYD'S TEST 140 kg. WP 70 kg. AI 24.4.25 A	
" INJECTION	"	"	"		
AIR PIPES	"	"	"	A	
FUEL PIPES	"	"	"		
FUEL PUMPS	"	"	"		
SILENCER	"	"	"		
" WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *See Secretary's letter E.3.1.23.* Receivers *E.3.1.23.* Separate Tanks
SPARE GEAR as per list, approved on the 12th Febr. 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 -- } 11 5/8 23; 10 24; 20 24, 10 25.
{ During erection on board vessel -- }
Total No. of visits in shop 6
Dates of Examination of principal parts—Cylinders 20 24, 25 Covers 20 24, 25 Pistons 24 25 Rods Connecting rods 11 5/8 23; 24 25
Crank shaft 10 24, 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 20.4.25
Completion of fitting sea connections Stern tube Screw shaft and propeller
Material of crank shaft I.M. Steel Identification Mark on Do. LLOYD'S No 6036 AI 10.10.24 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 Lkm. report no 2517*

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 engines, see Lkm. Reports 2602 and 2603.*

The amount of Entry Fee ... £ : : When applied for,
Special ... *Rs 218, 40* : : 21 Aug. 1925
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) *Rs 19, 11* : : (Dep. R. 19 25)
Rs 237. 51

Committee's Minute

Assigned

TUES. 13 OCT 1925

See Gov. G.E. 6213

A. G. Bakson
Engineer Surveyor to Lloyd's Register of Shipping.
Assisted by Mr. K. J. Andersson



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