

REPORT ON OIL ENGINE MACHINERY.

No. 2604

Received at London Office 24 AUG 1925 8 OCT 1925

Date of writing Report 21st Aug. 1925 When handed in at Local Office Stockholm Port of Stockholm

No. in Survey held at Sickla, Skm. Dist. Date, First Survey 11 Oct. 1923 Last Survey 10 Aug. 1925

Reg. Book. Single } Screw vessels (not yet named) Tons { Gross _____
Twin }
Triple } Net _____

Master _____ Built at Göteborg By whom built Aktiebolaget Lindholmsvarvet Yard No. 923 When built 1925

Engines made at Stockholm By whom made Aktie Atlas-Diesel Engine No. 40451 When made 1925

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

Brake Horse Power 100 Owners A. B. Svenska Ostersjiska Kompaniet Port belonging to Göteborg

Nom. Horse Power as per new 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 430 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 91, Section 2, par. 7 of Rules) Metric 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.
as fitted 165.0 -"-

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 _____
as fitted _____ as fitted _____ 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 _____

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 fitted, is the shaft lapped or protected between the liners _____ If without liners, is the shaft arranged to run in oil _____

Is an 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 _____

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 _____

No. in 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 _____

No. of pumps _____ No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room _____

No. in holds, etc. _____ No. of ballast pumps _____ How driven _____ Sizes of pumps _____

No. of 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 there a communication between the sea and the bilges _____ Is the screw shaft tunnel watertight _____ Is it fitted with a watertight door _____

Is there a means provided 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 155/45 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 _____

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

Are the air compressors and their coolers made so as to be easy of access _____

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 min 23 tons/
sq. inch.

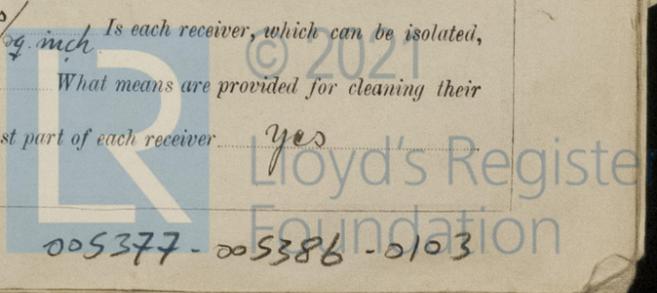
Thickness 15.5 mm. Working pressure by Rules 1024 lbs/ No. of starting air receivers 1 Internal diameter 300 mm.
sq. inch.

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

Thickness 18.5 mm. Working pressure by rules 1020 lbs/ Is each receiver, which can be isolated,
sq. inch.

Is there 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 there drain holes 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?

Rpt. 4b

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	(The thickness of the cylinder liners is more than 1/15 of the cylinder diam.)				
COVERS water passages	24.4.25	-	4 kg/cm ²	LLOYD'S TEST 4 kg. AI 24.4.25 A	
JACKETS	24.4.25	-	ditto	ditto	
PISTON WATER PASSAGES	(open pistons)				
MAIN COMPRESSORS—1st STAGE	24.4.25	10 kg/cm ²	20 kg/cm ²	A	
2nd "	24.4.25	70 "	140 "		
3rd "	-	-	-		
AIR RECEIVERS—STARTING	24.4.25	70 kg/cm ²	140 kg/cm ²	No 5306 LLOYD'S TEST 140 kg. WP 70 kg. AI 24.4.25 A	
INJECTION	"	"	"	No 5307 LLOYD'S TEST 140 kg. WP 70 kg. AI 24.4.25 A	
AIR PIPES	"	"	"		
FUEL PIPES	"	"	"	A	
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 Feb. 1923, will be inspected, when machinery is being fitted on 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; 31 3, 24 4, 10 8 25. During erection on board vessel -- in shop 6. Total No. of visits

Dates of Examination of principal parts—Cylinders 31 3, 24 4, 25. Covers 31 3, 24 4, 25. Pistons 24 4, 25. Rods ~ Connecting rods 11 5/8 23; 2 4. Crank shaft 10 24, 24 4, 25. Thrust shaft ~ Tunnel shafts ~ Screw shaft ~ Propeller ~ Stern tube ~ Engine seatings ~ Engines tried under working conditions in shop 31 3. Engines holding down bolts ~ Completion of pumping arrangements ~ Completion of fitting sea connections ~ Screw shaft and propeller

Material of crank shaft *I.M. Steel* Identification Mark on Do. *LLOYD'S No 6035 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 Skm 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 Skm. Reports nos. 2602 and 2603.*

The amount of Entry Fee ... £ : : When applied for, Special ... £ 218.40 : : 21 Aug. 1925. Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ 19.11 : : Sep. 1925. £ 237.51

Committee's Minute

Assigned

TUES. 13 OCT 1925

See Gov. GE 6212

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



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