

REPORT ON OIL ENGINE MACHINERY.

No. 35.

Received at London Office
 Date of writing Report 22nd May 1923. When handed in at Local Office 22nd May 1923. Port of Winterthur
 Date, First Survey 20th May 1920 Last Survey 22nd May 1923.
 Survey held at Winterthur.
 Number of Visits
 Tons { Gross
 Net
 on the ^{Single} Twin Screw vessels
 Triple
 Built at Kobe By whom built Kobe Steel Works. Yard No. When built
 By whom made Sulzer Bros. & Co. Engine No. 5049 When made 1923
 By whom made Boiler No. When made
 Port belonging to
 Brake Horse Power 1600 (2 ENG.) Owners
 Nom. Horse Power as per Rule 370 (2 ENG.) Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

MAIN ENGINES, &c.—Type of Engines Sulzer Diesel Engines 2 or 4 stroke cycle 2 Single or double acting Single
 Maximum pressure in cylinders 35 ATs. 500 lb No. of cylinders 8 (2 ENG.) No. of cranks 8 (2 ENG.) Diameter of cylinders 470 mm 18 1/2
 Length of stroke 740 mm Revolutions per minute 150 Means of ignition Temperature due to Compression Kind of fuel used Heavy fuel oil
 Is there a bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 596 mm
 Distance between centres of main bearings 940 mm Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule 285.5 mm
 as fitted 290 mm
 Diameter of crank pins 290 mm Breadth of crank webs as per Rule 399.7 mm
 as fitted 400 mm Thickness of ditto as per Rule 159.8 mm
 as fitted 160 mm
 Diameter of flywheel shaft as per Rule 285.5 mm
 as fitted 290 mm Diameter of tunnel shaft as per Rule
 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
 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 direct Is a governor or other arrangement fitted to prevent racing of the engine when disconnected Yes Thickness of cylinder liners 38 mm
 Are the cylinders fitted with safety valves Yes Means of lubrication forced 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
Yes 2. Double acting each engine
 No. of cooling water pumps 150 D.P.S. 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 2. Single A each Eng. Diameter of ditto 120 mm Stroke 156 mm
 Can one be overhauled while the other is at work Yes 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 2 (2 ENG.) No. of stages 3 Diameters 560/510/120 Stroke 350 mm Driven by main shaft
 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 2. Double Acting (2 ENG.) Diameter 1000 mm Stroke 570 mm Driven by main shaft
 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 Yes
 as fitted
AIR RECEIVERS—No. of high pressure air receivers 2 (2 ENG.) Internal diameter 246 mm Cubic capacity of each 85 litres
 material S.M. Steel Seamless, lap welded or riveted longitudinal joint seamless Range of tensile strength 28 To 32 Tons per sq.
 thickness 12 mm working pressure by Rules 92 at's No. of starting air receivers 10 Internal diameter 410
 Total cubic capacity Material Seamless, lap welded or riveted longitudinal joint
 Range of tensile strength 60/70 kg thickness 17.5 Working pressure by Rules 70 kg Is each receiver, which can be isolated.
 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
 inner surfaces Injection Receiver: Opening 125 mm dia at top end. 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?

pt. 4b.

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	1-11-21, 2-11-21, 3-11-21, 7-12-21	35 AT5.	75 AT5.	R	Test satisfactory
" " COVERS	" " " "	" "	" "	R	-do-
" " JACKETS	27-3-23, 20-4-23.	1 "	3 "	R	-do-
" " PISTON WATER PASSAGES	9-4-23, 17-4-23.	3 "	6 "	R	-do-
MAIN COMPRESSORS—1st STAGE	28-11-21, 9-12-21.	3 "	35 "	R	-do-
" 2nd "	-do- -do-	17.5 "	" "	R	-do-
" 3rd "	3-12-21, 15-12-21.	70 "	140 "	R	-do-
AIR RECEIVERS—STARTING					
" INJECTION	16-4-23, 30-4-23.	40 "	140 "	R	-do-
AIR PIPES	7-12-22, 8-12-22, 11-12-22, 16-3-23, 19-3-23	" "	" "	R	-do-
FUEL PIPES	" " " " " "	" "	" "	R	-do-
FUEL PUMPS & VALVES	1-3-21, 25-2-21, 12-5-21, 14-7-21	" "	" "	R	-do-
SILENCER EXHAUST PIPES	12-5-21, 13-5-21	1 "	3 "	R	-do-
" WATER JACKET	27-3-23, 20-4-23	" "	" "	✓	-do-
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting
(If not, state date of approval)

23-1-20

Receivers 14-7-6-20

Separate Tanks

SPARE GEAR

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - 20-5-20, 15-7-20, 14-10-20, 15-10-20, 8-1-21, 25-2-21, 1-3-21, 12-5-21, 13-5-21, 14-7-21, 1-11-21, 2-11-21, 3-11-21, 28-11-21, 30-11-21, 7-12-21, 9-12-21, 13-12-21, 15-12-21, 4-1-22, 7-12-22, 8-12-22, 11-12-22, 18-12-22, 19-12-22, 22-3-23, 27-3-23, 9-4-23, 10-4-23, 11-4-23, 12-4-23, 16-4-23, 17-4-23, 20-4-23, 26-4-23, 30-4-23
During erection on board vessel - 3-5-23, 22-5-23
Total No. of visits 19-3-23, 16-3-23

Dates of Examination of principal parts—Cylinders 10-4-23, 30-4-23 Covers 10-4-23, 30-4-23 Pistons 17-4-23, 30-4-23 Rods 12-4-23, 30-4-23 Connecting rods 12-4-23, 30-4-23

16-4-23
Crank shafts 30-4-23 Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings

Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions

Completion of fitting sea connections Stern tube Screw shaft and propeller

Material of crank shafts S.M. Ann. Eng. Steel Identification Mark on Do. ENA. N° 5049 or 5053 17-4-23 or 30-4-23 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. Yes.

Is this machinery duplicate of a previous case No. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed under Special Survey in accordance with the requirements of the Rules, the Secretary's letters and the approved plans. Materials and workmanship good. Full power trials of Engines in shop satisfactory.

The amount of Entry Fee ... £ 5-0-0 : When applied for, 30th May 1923.
Special ... £ 80-10-0 :
Donkey Boiler Fee ... £ : : When received, 1st June 1923.
Travelling Expenses (if any) £ : :

Committee's Minute

FRI. 20 FEB 1925

TUES. 12 MAY 1925

Assigned

FRI. 19 JUN 1925



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