

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 8

Date of writing Report 10th Feb. 1921. When handed in at Local Office 10th Feb. 1921. Port of Winterthur Received at London Office MON. 21 FEB. 1921

No. in Survey held at Winterthur

Reg. Book.

Date, First Survey 17th Aug. 20

Last Survey

19

Single }
Twin } Screw vessels
Triple }

Master Built at Newcastle

By whom built Sir W. G. Armstrong

Tons }
Gross }
Net }

Engines made at Winterthur

By whom made Sulzer Freres S. A.

Yard No. 2835

When built

Donkey Boilers made at

By whom made

Engine Nos 2839 When made 1920

Brake Horse Power 2500 (Two Engines)

Owners

Boiler No. When made

Nom. Horse Power as per Rule 680 (2 Engines)

Refrigerating Machinery fitted for cargo purposes

Port belonging to

Is Electric Light fitted

L ENGINES, &c.—Type of Engines

Sulzer Marine Diesel Engine

2 or 4 stroke cycle 2

Single or double acting Single

Maximum pressure in cylinders 35 at.

No. of cylinders 4 Each Engine

No. of cranks 4 Each Engine

Diameter of cylinders 23 5/8"

Length of stroke 940 mm

Revolutions per minute 100

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)

760 mm

Distance between centres of main bearings

1180 mm

Is a flywheel fitted

Yes

Diameter of crank shaft journals

as per Rule 364 mm

Diameter of crank pins

370 mm

Breadth of crank webs

as per Rule 484 mm

as fitted 520 mm

Thickness of ditto

as per Rule 203.8 mm

Diameter of flywheel shaft

as per Rule 364 mm

as fitted 370 mm

Diameter of tunnel shaft

as per Rule

as fitted

Diameter of thrust shaft

as per Rule

as fitted

Diameter of screw 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

Is the 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 45 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

Yes

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 DOUBLE (each Engine)

Is the sea suction provided with an efficient strainer which can be cleared

In the vessel

No. of bilge pumps fitted to the main engines 2 SINGLE ACTING

Diameter of ditto 150 mm

Stroke 212 mm

Can one be overhauled while the other is at work

Yes

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

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

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 Each Engine

No. of stages 3

Diameters 640/580/140

Stroke 560

Driven by Main Shaft

No. of auxiliary air compressors

2 (Total No.)

No. of stages 3

Diameters 190/190/120/55

Stroke 180

Driven by Electric Motor

No. of small auxiliary air compressors

1 (Total No.)

No. of stages 2

Diameters 140/45

Stroke 150

Driven by Hot Bulb Engine

No. of scavenging air pumps

1 (Each Engine)

Diameter 1300

Stroke 700

Driven by Main Shaft

Diameter of auxiliary Diesel Engine crank shafts

as per Rule

as fitted

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

Yes

RECEIVERS:—No of high pressure air receivers

1 Each Engine

Internal diameter 300 mm

Cubic capacity of each 150 Litres

Material S.M. Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength 45/55 Kg. per mm²

Thickness 15 mm

Working pressure by Rules 99.3 at.

No. of starting air receivers 4 Each Engine

Internal diameter 540 mm

Cubic capacity 3200 LITRES (Each Engine)

Material S.M. Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength 45/52 Kg. per mm²

Thickness 25 mm

Working pressure by rules 100 at.

Is each receiver, which can be isolated,

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

surfaces Opening 240 mm dia. covered by portable door

for starting air receivers

Is there a drain arrangement fitted at the lowest part of each receiver

Yes

66 mm dia. hole at top of receivers. (Injection)

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					
" " COVERS					
" " JACKETS					
" " PISTON WATER PASSAGES					
MAIN COMPRESSORS—1st Stage					
" 2nd "					
" 3rd "					
AIR RECEIVERS—STARTING	14-8-20 & 18-8-20	60 ATS.	120 ATS.	R	Test satisfactory
" INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

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

Yes

Receivers

Yes

Separate Tanks

SPARE GEAR

The foregoing is a correct description

Guizer Frères

Société Anonyme

Manufacturers.

Dates of Survey while building
During progress of work in shops - 14-8-20, 18/8/20, 7/10/20, 18/11/20, 9/12/20, 23/1/21
During erection on board vessel -
Total No. of visits

Dates of Examination of principal parts—Cylinders 18-11-20 Covers
Crank shafts 23-1-21 Thrust shaft Tunnel shafts Screw shaft
FLYWHEEL - PUMP
Engines holding down bolts Completion of pumping arrangements
Engines tried under working conditions

Completion of fitting sea connections Stern tube
Material of crank shafts S.M. STEEL Identification Mark on Do. 2839 R. Material of thrust shaft
" FLYWHEEL - CAST STEEL Identification Mark on Do.
" PUMP - do - Identification Marks 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.)

The amount of Entry Fee ... £ : : When applied for,
Special ... £ 18 : - : 19
Doukey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 2/2/19 21/3/21

Committee's Minute

Assigned

W.G. Vallis

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. OCT. 7 1921

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