

REPORT ON OIL ENGINE MACHINERY.

Sld. No. 29100

Lon No. 89,068

14 JUL 1925

Date of writing Report

7 JUN 1925

When handed in at Local Office

26 June 1925 Port of London

No. in Survey held at
Reg. Book.

Bedford

Date, First Survey

24 April 1925

Last Survey

13 July 1925

Number of Visits

10

90804 on the

Single
Twin
Triple

Screw vessels

"SILVERAY"

Tons { Gross 4585
Net 2626

Master

Built at

Lunderland

By whom built

J. Thompson & Co. Ltd

Yard No.

554

When built

1915

Engines made at

Lunderland

By whom made

W. Doxford & Sons Ltd

Engine No.

103

When made

1915

Auxiliary machinery made at

Bedford

By whom made

H. H. Allen & Sons Ltd

Boiler No.

32970

When made

1915

Brake Horse Power

100 each set

Owners

Wap Shipping Co. Ltd

Port belonging to

London

Nom. Horse Power as per Rule

Inferior 86

Is Refrigerating Machinery fitted for cargo purposes

✓

Is Electric Light fitted

Yes

Auxiliary

3 sets

OIL ENGINES, &c.—Type of Engines

Burmester & Wain Design

2 or 4 stroke cycle 4 Single or double acting Simple

Maximum pressure in cylinders

530 lb

No. of cylinders

2

No. of cranks

2

Diameter of cylinders

325 mm

Length of stroke

350 mm

Revolutions per minute

300

Means of ignition

Compression

Kind of fuel used

Heavy oil

Is there a bearing between each crank

Yes

Span of bearings (Page 92, Section 2, par. 7 of Rules)

362 7/8 in

Distance between centres of main bearings

600 mm

Is a flywheel fitted

Yes

Diameter of crank shaft journals

as per Rule 170 mm
as fitted 170 mm

Diameter of crank pins

190 mm

Breadth of crank webs

as per Rule 226 mm
as fitted 380 mm diameter

Thickness of ditto

as per Rule 65 mm
as fitted 92 mm

Diameter of flywheel shaft

as per Rule 310 at shaft
as fitted

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

If the liner is in more than one length are the joints burned

Is the after end of the liner made watertight in the propeller boss

If the liner does not fit tightly at the part between the bearings to 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 tube

Diameter of propeller

Pitch of 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 detached

Yes

Thickness of cylinder liners

29 7/8 in

Are the cylinders fitted with safety valves

Yes

Means of lubrication

Forced. Rotary pump from crank shaft

non-conducting material Lapped 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

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

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

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

One on each set

No. of stages

2

Diameters

54 + 180 mm

Stroke

210 7/8 in

Driven by

Crankshaft

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

Diameter

Stroke

Driven by

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

IR RECEIVERS:—No of high pressure air receivers

3

Internal diameter

9 3/4 in

Cubic capacity of each

90 litres

material

Solid drawn steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength

29-33 tons

thickness

3/8 in

working pressure by Rules

1025 lb for 850 lb regd

No. of starting air receivers

3 (1 each set)

Internal diameter

12 in

cubic capacity

each 150 litres

Material

Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength

29-33 tons

thickness

1/2 in

Working pressure by rules

1170 lb

Is each receiver, which can be isolated,

fitted with a safety valve as per Rule

Fusible plug

Can the internal surfaces of the receivers be examined

Yes

What means are provided for cleaning their

inner surfaces

✓

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

Yes

Lloyd's Register
Foundation
217-0057

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					Standard parts
COVERS	50lb water test on jacket		1000lb paraffin face test		Stamped &
JACKETS	50lb water test				during construction
PISTON WATER PASSAGES	hot cooled				
MAIN COMPRESSORS—1st STAGE	50lb jacket test	250lb	Cylinder test		
2nd	2000lb paraffin test				
3rd					
AIR RECEIVERS—STARTING	2000lb hydraulic		Stamped with date & S	Chesford/see C/P 102603/4/7	
INJECTION	2000lb			R 103596/9 104400	
AIR PIPES	2000lb				
FUEL PIPES	"				
FUEL PUMPS	"				
SILENCER	hot cooled				
WATER JACKET	"				
SEPARATE FUEL TANKS	✓				

PLANS. Are approved plans forwarded herewith for shafting. No standard design Receivers
SPARE GEAR Connecting rod & main bearing bolts & nuts. Complete sets of exhaust valves
fuel and air valves. Piston rings for oil engine & compressor pistons. Spare
former. Sets of valves for air compressors & spare H & L cooling coils. Minor spares
of every description likely to be required.

The foregoing is a correct description,

B. W. Allen & Co. for

W. H. ALLEN, SONS & Co., Ltd.,
Manufacturers.

Dates of Survey while building
During progress of work in shops - 1925
During erection on board vessel -
Total No. of visits 10 (IN SHOPS)
Dates of Examination of principal parts—Cylinders During construction
Covers Standard size
Pistons Connecting rods
Crank shafts Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings
Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions
Screw shaft and propeller
Completion of fitting sea connections Stern tube 594 9.1.25 TH S
Material of crank shafts Identification Mark on Do. 594 9.1.25 TH S 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. 46

Is this machinery duplicate of a previous case

Standard 50 HP cylinder
If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) These Diesel Engines have been constructed

under special survey and the materials and workmanship are good.
The engines are coupled direct to Continuous wound DC Dynamos made by The Sunderland
Forge and Engineering Co. Ltd. 65 kW 295 amp 220 volts 300 RPM and numbered 36012 1.2
Full load trials were witnessed of 6 hours duration followed by a 10% overload trial of
2 hours. The trials were considered satisfactory in every respect.
The complete sets are now being forwarded to Messrs Doxford & Sons at Sunderland
where they will be erected on board.
These generators have now been fitted and fixed in a satisfactory manner and tried under
working conditions with satisfactory results. W. H. Allen

The amount of Entry Fee ... £ : : When applied for,

Special 2 1/2% per NHP £ 8 : 12 : 27 JUN 1925

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ 7 : 10/10 : 23 JUN 1925

FRI, 24 JUL 1925

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



© 2019

Lloyd's Register
Foundation