

REPORT ON OIL ENGINE MACHINERY.

No. 16931
-7 NOV 1927

Received at London Office

of writing Report. 26.10.1928 When handed in at Local Office

Port of Rotterdam

in Survey held at Rotterdam

Date, First Survey 7.6.1926 Last Survey 25.10.1927

Number of Visits 58

Single Motor
on the Tonnage Screw vessels
Triple

KOTA INTEN

Tons: Gross 4104
Net 4549

uilt at Rotterdam

By whom built Mr. Fijenwood

Yard No. 306 When built 1924

Engines made at Rotterdam

By whom made Mr. Fijenwood

Engine No. 537 When made 1924

Monkey Boilers made at

By whom made

Boiler No. 1 When made

ake Horse Power

Owners Chemisch Industrieel Laboratorium Rotterdam

om. Horse Power as per Rule 1857

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.

Type of Engines

Diesel Oil Engine

2 or 4 stroke cycle 2 Single or double acting Double

Pressure in cylinders

35 kg

No. of cylinders 4

Diameter of cylinders

700 mm

No. of cranks 4

Length of stroke 1200 mm

Cranks, adjacent to the Crank, measured from inner edge to inner edge

1200 mm

Is there a bearing between each crank Yes

per minute 90

Flywheel dia.

2700 mm

Weight

4700 kg

Means of ignition

Kind of fuel used Diesel oil

Shaft, dia. of journals

as per Rule 500 mm

Crank pin dia.

500 mm

Crank Webs

Mid. length breadth 705 mm

Mid. length thickness 320 mm

Thickness parallel to axis 222 mm

Thickness around eye-hole 215 mm

Shafts, diameter

as per Rule 500 mm

Intermediate Shafts, diameter

as per Rule 430 mm

Thrust Shaft, diameter at collars

as per Rule 455 mm

Shafts, diameter

as per Rule 500 mm

Screw Shaft, diameter

as per Rule 490 mm

Is the tube

screw

shaft fitted with a continuous liner No

Liners, thickness in way of bushes

as per Rule

as fitted

Thickness between bushes

as per Rule

Is the after end of the liner made watertight in the

Is the liner is in more than one length are the junctions made by fusion through the whole thickness of 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

Are the liners fitted, is the shaft lapped or protected between the liners

Is an approved Oil Gland or other appliance fitted at the after

tube shaft

Yes

Length of Bearing in Stern Bush next to and supporting propeller

1900 mm

er, dia. 5790 mm

Pitch 5330 mm

No. of blades 4

Material Bronze

whether Moveable No

Total Developed Surface 120.56 sq. feet

of reversing Engines

Camshaft

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Means of lubrication

Thickness of cylinder liners

85 mm

Are the cylinders fitted with safety valves Yes

Are the exhaust pipes and silencers water cooled or lagged with

acting 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 Tunnel

Water Pumps, No.

3

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

Yes

Pumps fitted to the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

connected to the Main Bilge Line

No. and Size 2. 1 à 250 cw³ per hour

How driven Electric

1 à 40 cw³ per hour

Pumps, No. and size

1 à 250 cw³ per hour

Lubricating Oil Pumps, including Spare Pump, No. and size

2 à 50 M³ per hour

497 m³ = 1765 cw³

independent means arranged for circulating water through the Oil Cooler

Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Engine and Boiler Room

5 à 90 mm

1 in tunnel à 90 mm

1 in forepeak tank à 90 mm

1 in effluent tank à 90 mm

99.100 à 90 mm

2 in afterpeak tank à 90 mm

1 in forepeak tank à 90 mm

ndent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

One à 140 mm

One à 140 mm

One à 140 mm

One à 140 mm

One à 140 mm

One à 140 mm

One à 140 mm

One à 140 mm

the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Yes

Are the Bilge Suctions in the Machinery Space

easily accessible mud-boxes, placed above the level of the working floor, with straight nail pipes to the bilges

Yes

sea Connections fitted direct on the skin of the ship

Yes

Are they fitted with Valves or Cocks

Both

fixed sufficiently high on the ship's side to be seen without lifting the platform

Yes

Are the Overboard Discharges above or below the deep water line Above

each fitted with a Discharge Valve always accessible on the plating of the vessel

Yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

pes pass through the bunkers

None

How are they protected

Yes

pes pass through the deep tanks

None

Have they been tested as per Rule

Yes

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

Arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

ment to another

Yes

Is the Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from Upper platform

od vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Yes

Air Compressors, No.

1

No. of stages 3

Diameters 210 x 966-875 x

Stroke 650

Driven by Main Engine

ary Air Compressors, No.

2

No. of stages 3

Diameters 74 x 322-282 x 322-322

Stroke 100 mm

Driven by Electric Motor

Auxiliary Air Compressors, No.

1

No. of stages 3

Diameters 26 x 110-101 x 110-101

Stroke 80 mm

Driven by Main motor

nging Air Pumps, No.

2. Tandem

Diameter

1160

Stroke

1100 mm

Driven by Main Engine

ary Engines crank shafts, diameter

as per Rule

as fitted 255 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Yes

Internal surfaces of the receivers be examined

Yes

What means are provided for cleaning their inner surfaces

Covers

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

Yes

Pressure Air Receivers, No.

6 + 1

Cubic capacity of each 2750 liter

Internal diameter

6 à 455 mm

Thickness

37.5 mm

Is, lap welded or riveted longitudinal joint

Solid drawn

Material 1 M. steel

Range of tensile strength 50-54 kg

Working pressure by Rules 124 kg

124 kg

124 kg

ing Air Receivers, No.

1

Total cubic capacity

16.57 m³

Internal diameter

1902 mm

Thickness

26 mm

Is, lap welded or riveted longitudinal joint

Riveted

Material 1 M. steel

Range of tensile strength 44-50 kg

Working pressure by Rules 25.6 kg

25.6 kg

25.6 kg

003458-003465-0054

IS A DONKEY BOILER FITTED?
HYDRAULIC TESTS:—

If so, is a report now forwarded?

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	30. 8. 26	35-16 1/2 cwt	45 ATM/cwt	LLOYD'S TEST 45 ATM PK. with date.	
" " COVERS	1-2-9/10 26	"	20 ATM/cwt	LLOYD'S TEST 20 ATM PK. with date.	
" " JACKETS	18-23-24-28-29 9/10 26	"	6 ATM/cwt	LLOYD'S TEST 6 ATM PK. with date.	
" PISTON WATER PASSAGES	23. 9. 26	"	10 ATM/cwt	LLOYD'S TEST 10 ATM PK. with date.	
MAIN COMPRESSORS—1st STAGE	1-10. 26	5 ATM/cwt	40 ATM/cwt	LLOYD'S TEST 40 ATM PK. 1-10-26	
" 2nd "	1-10. 26	20 ATM/cwt	40 ATM/cwt	LLOYD'S TEST 40 ATM PK. 1-10-26	
" 3rd "	6. 8. 26	45 ATM/cwt	150 ATM/cwt	LLOYD'S TEST 150 ATM PK. 6. 8. 26	
AIR RECEIVERS—STARTING	25. 5. 27.	25 ATM/cwt	39 ATM/cwt	LLOYD'S TEST 39 ATM W.P. 25 ATM TS. 17. 5. 27.	
" INJECTION	19. 12. 26	45 ATM/cwt	150 ATM/cwt	LLOYD'S TEST 150 ATM W.P. 45 ATM VS. 19. 12. 26 LLOYD'S TEST 150, 180, 200 K.G. W.P. 40. 60 K.G. T.W. 12. 9. 27	
AIR PIPES	22. 9. 27	40-60 1/2 cwt	120-180 1/2 cwt	"	
FUEL PIPES	22-9-27	60 1/2 cwt	180 K.G.	"	
FUEL PUMPS	4-17/9 26	45 ATM	150 ATM	LLOYD'S 150 ATM PK. 4-17/9/26	
SILENCER	"	"	"	"	
" WATER JACKET	"	"	"	"	
SEPARATE FUEL TANKS	"	"	"	"	

PLANS. Are approved plans forwarded herewith for Shafting 30. 8. 26 Receivers 17. 8. 26 Separate Tanks
(If not, state date of approval) 1. 6. 28.
Donkey Boilers General Pumping Arrangements 20. 1. 27. Oil Fuel Burning Arrangements 11. 1. 27.

SPARE GEAR: cylinder cover complete, one set of valve camming, valves sprayers, etc. One top and one bottom liner. One set of fuel needles, one piston with rod complete. One set of telescopic cooling pipes for pistons, one set of oiler wheels for the camshaft drive. Thrusts and nuts for one cylinder and one bottom piece, 1 crosshead bolts and nuts, 2 bottom end bolts and nuts, 4 main bearing bolts and one set of bolts for one crankshaft coupling. One set of bolts for one intermediate shaft coupling. One set of bottom end brackets, one set of top end brackets, one set of main bearing trunks. For compressor: One plate set of piston rings, one set of suction and delivery valves, one set of valves for scavenging. One fuel pump, one additional water circulation pump. A full set of spare parts for each of the pumps, lubricating pumps, bilge pumps & ballast pumps, including pump valves. A quantity of all bolts and nuts. Several lengths of pipes with unions and flanges suitable for each use cited. One cast iron propeller. One shaft and further many additional parts as per owner's specification.
The foregoing is a correct description.

Maatschappij voor Scheeps- en Werktuigbouw
"FIJENOORD" Manufacturer.

Dates of Survey while building	During progress of work in shops--	1926/6 8-10-18/1 15-21-28-30/4-14/17 7-17/10 11 12 1927 4-10/3-10-16-23/16-14-22-25/11-12-14-27/4-5-11/10
	During erection on board vessel--	2/19/16 7/9/10/20/29/39 7/9/13/18/39 3/9/23/28/30/5 11-13/21 25/16 14 7 14 14 18/18 18 18 18 9 9 9 9 10 10 10 10
	Total No. of visits	58.

Dates of Examination of principal parts—Cylinders None Covers " Pistons changing Rods 7, 26 17, 27 Connecting rods 4, 25
Crank shaft None Flywheel shaft " Thrust shaft " Intermediate shafts none Tube shaft "
Screw shaft " Propeller 4-5-27 Stern tube 4-5-27 Engine seatings 4-5-27 Engines holding down bolts 7-7-27

Completion of fitting sea connections 4-5-27. Completion of pumping arrangements 17-10-27 Engines tried under working conditions 25-10-27

Crank shaft, Material J. M. Steel	Identification Mark	LLOYD'S 17030 MB 307-16	Flywheel shaft, Material J. M. Steel	Identification Mark	LLOYD'S 17030 HK. 0. 11. 26
Thrust shaft, Material J. M. Steel	Identification Mark	LLOYD'S 17034 HK. 16-10-26	Intermediate shafts, Material J. M. Steel	Identification Mark	LLOYD'S 17030 HK. 16-10-26
Tube shaft, Material L	Identification Mark	MB 307-26	Screw shaft, Material J. M. Steel	Identification Mark	LLOYD'S 17060 HK. 25. 9. 26

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 machinery has been made in accordance with the approved plans, Society's Rules and Secretary's letter. Material tested as required and workmanship good, the whole was found in a good working condition during a trial trip on the North Sea and the vessel is in my opinion eligible to be recorded in the Society's Register. Book with LMC 10. 27. 09.

The amount of Entry Fee ... 72.00: When applied for, 1927
including 1000 for ... 1754.00: When received, 19-11-27
AIR VESSEL ... 50.00:
Donkey Boiler Fee ... 115.00:
Travelling Expenses (if any) ...

Committee's Minute

Assigned

FRI. 11 NOV 1927
TUES. 15 NOV 1927

+ LMC 10: 27

Oil Engines

J. J. Oetova
Engine Surveyor to Lloyd's Register of Shipping.



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