

REPORT ON OIL ENGINE MACHINERY.

No. 854

8 JUL 1926

Received at London Office

of writing Report 19th June 1926. When handed in at Local Office

19. Port of Bremen.

in Survey held at Augsburg

Date, First Survey 11th January 26 Last Survey 17th June 1926.

Book.

Number of Visits 41

on the ^{Single} ~~Twin~~ ^{Triple} Screw vessels

"Cabo Palos"

Tons { Gross +
Net +

at Bilbao

By whom built Compania Euskalduna No. 73 When built 1926.

ines made at Augsburg

By whom made Maschf. Augsburg-Nürnberg Engine No. 26040 When made 1926.

key Boilers made at

By whom made

Boiler No. + When made +

ke Horse Power 2000

Owners Barra y Cia.

Port belonging to Scilla

n. Horse Power as per Rule 438

Is Refrigerating Machinery fitted for cargo purposes +

Is Electric Light fitted +

ENGINES, &c.—Type of Engines M.H.N. Oil Engine 2 or 4 stroke cycle 4 Single or double acting Single

imum pressure in cylinders 35 kg/cm² No. of cylinders 6 Diameter of cylinders 700 mm No. of cranks 6 Length of stroke 1400 mm

of bearings, adjacent to the Crank, measured from inner edge to inner edge 970 mm Is there a bearing between each crank yes

olutions per minute 108/113 Flywheel dia. 2700 mm Weight 10,000 kgs Means of ignition Diesel system Kind of fuel used Gas Oil

ank Shaft, dia. of journals as per Rule 443.7 mm as fitted 450 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth 840 mm shrunk Thickness parallel to axis 455 mm

Mid. length thickness 290 mm Thrust Shaft, diameter at collars as per Rule + as fitted +

wheel Shafts, diameter as per Rule + as fitted + Intermediate Shafts, diameter as per Rule + as fitted +

Screw Shaft, diameter as per Rule + as fitted + Is the { tube { shaft fitted with a continuous liner { +

Is the { screw { +

onze Liners, thickness in way of bushes as per Rule + as fitted + Thickness between bushes as per rule + as fitted + Is the after end of the liner made watertight in the

eller boss + If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner +

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 +

two liners are fitted, is the shaft lapped or protected between the liners. + Is an approved Oil Gland or other appliance fitted at the after

of the tube shaft + Length of Bearing in Stern Bush next to and supporting propeller +

opeller, dia. + Pitch + No. of blades + Material + whether Moveable + Total Developed Surface + sq. feet

ethod of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

ced Thickness of cylinder liners 52.5/40 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

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 +

oling Water Pumps, No. + Is the sea suction provided with an efficient strainer which can be cleared within the vessel +

ge Pumps fitted to the Main Engines, No. 1 Diameter 160 mm Stroke 150 mm Can one be overhauled while the other is at work +

umps connected to the Main Bilge Line { No. and Size + How driven +

allast Pumps, No. and size + Lubricating Oil Pumps, including Spare Pump, No. and size 1 Rotating pump.

two independent means arranged for circulating water through the Oil Cooler + Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

umps, No. and size:—In Engine and Boiler Room +

Holds, &c. +

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

all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes + Are the Bilge Suctions in the Machinery Space

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

all Sea Connections fitted direct on the skin of the ship + Are they fitted with Valves or Cocks. +

they fixed sufficiently high on the ship's side to be seen without lifting the platform plates + Are the Overboard Discharges above or below the deep water line

they each fitted with a Discharge Valve always accessible on the plating of the vessel + Are the Blow Off Cocks fitted with a spigot and brass covering plate +

hat pipes pass through the bunkers + How are they protected. +

hat pipes pass through the deep tanks + Have they been tested as per Rule +

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

the 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

partment to another + Is the Shaft Tunnel watertight + Is it fitted with a watertight door + worked from +

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

Main Air Compressors, No. 1 No. of stages 3 Diameters 700/620/150 Stroke 500 mm Driven by Crank shaft

Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 350/295/85 Stroke 220 mm Driven by Aux Oil Engines

all Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 60/32 mm Stroke 35 mm Driven by hand worked

upercharger scavenging Air Pumps, No. 1 Turbo Blower Diameter of wheel 750 mm Stroke + Driven by Electr. motor.

Auxiliary Engines crank shafts, diameter as per Rule + as fitted 155 mm

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

on the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces holes with flanges

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

High Pressure Air Receivers, No. 1 Cubic capacity of each 200 litres Internal diameter 405 mm thickness 17.5 mm

Seamless, lap welded or riveted longitudinal joint Seamless Material S.M. steel Range of tensile strength 42 ÷ 50 kg/cm² Working pressure by Rules 81.6 kg/cm²

Starting Air Receivers, No. seven Total cubic capacity 8400 litres Internal diameter 585 mm thickness 27.5 mm

Seamless, lap welded or riveted longitudinal joint Seamless Material S.M. steel Range of tensile strength 42 ÷ 50 kg/cm² Working pressure by Rules 95.8 kg/cm²Air rec. for Aux. 1 of 275 litres, int. p 405 mm, Thckn: 17.5 mm. Seamless, Range 42 ÷ 50 kg/cm², W.P. by Rules 81.6 kg/cm²

W438-0293

IS A DONKEY BOILER FITTED?

HYDRAULIC TESTS:—

If so, is a report now forwarded? —

5b.

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE. kg/cm ²	TEST PRESSURE. kg/cm ²	STAMPED. LLOYD'S TEST	REMARKS.
ENGINE CYLINDERS ... <i>Liners</i>	<i>15.16.17.18/3/26.</i>	<i>35</i>	<i>75</i>	<i>75 ATM. P.K. DATE.</i>	<i>10.2.26</i>
" " COVERS	<i>23/3/26</i>	<i>2</i>	<i>20</i>	<i>20 ATM. P.K. 23.3.26.</i>	
" " JACKETS	<i>16/4/26 21/4/26.</i>	<i>2</i>	<i>6</i>	<i>6 ATM. P.K. 16.4.26. 21.4.26.</i>	
" PISTON WATER PASSAGES	<i>27.28/4/26</i>	<i>2</i>	<i>10</i>	<i>10 ATM. P.K. 27.28.4.26.</i>	
MAIN COMPRESSORS—1st STAGE	<i>20/4/26</i>	<i>Air 3 Water 2</i>	<i>Air 40 Water 10</i>	<i>40/10 ATM. P.K. 20.4.26.</i>	
" 2nd "		<i>16 2</i>			
" 3rd "	<i>10/4/26</i>	<i>75 2</i>	<i>150 10</i>	<i>150/10 ATM. P.K. 10.4.26.</i>	
AIR RECEIVERS—STARTING	<i>4/5/26, 17/5/26, 25/5/26.</i>	<i>80</i>	<i>160</i>	<i>160 ATM. W.P. 80 ATM. P.K. 4.5.26. 17.5.26. 25.5.26.</i>	
" INJECTION	<i>23/4/26.</i>	<i>80</i>	<i>160</i>	<i>160 ATM. W.P. 80 ATM. P.K. 23.4.26.</i>	
AIR PIPES	<i>8/6/26</i>	<i>35</i>	<i>75</i>		
" INJECTION	<i>10/6/26.</i>	<i>75</i>	<i>240</i>	<i>WHERE POSSIBLE MARKED: P.K.</i>	
FUEL PIPES	<i>11/6/26.</i>	<i>75</i>	<i>300</i>	<i>Not stamped.</i>	
FUEL PUMPS	<i>6/4/26.</i>	<i>75</i>	<i>150</i>	<i>150 ATM. P.K. 6.4.26.</i>	
STEAMER Exhaust manifold	<i>1/5/26 5/5/26.</i>	—	<i>6</i>	<i>6 ATM. P.K. DATE.</i>	
Cooling Water pipe Line					
WATER JACKET	<i>16/6/26</i>	<i>2 ÷ 3</i>	<i>10</i>	<i>Where possible marked: P.K.</i>	
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for Shafting Crank shaft: *2/11/25* Receivers *22/12/25*

Donkey Boilers —

General Pumping Arrangements —

Oil Fuel Burning Arrangements —

SPARE GEAR: *As per Rules.*

Maschinenfabrik Augsburg-Nürnberg A.G.

M. J. Lohmeyer

The foregoing is a correct description,

Manufacturer.

Dates of Examination of principal parts—Cylinders *16/4-21/4/26* covers *23/3/26* Pistons *27.28/4/26* Rods *26/4/26* Connecting rods *26/4/26*

Dates of Survey while building

During progress of work in shops—*Jan. 11, 20, 22, 29. Feb. 2, 3, 9, 11. Mar. 6, 9, 10, 11, 12, 15, 16, 17, 18, 23, 26. Apr. 1, 4, 6, 10, 11.*

During erection on board vessel—*22, 27, 28 May: 1, 4, 6, 11, 14, 17, 25. June: 8, 10, 11, 12, 16, 17.*

Total No. of visits *41*

Dates of Examination of principal parts—Cylinders *16/4-21/4/26* covers *23/3/26* Pistons *27.28/4/26* Rods *26/4/26* Connecting rods *26/4/26*

Crank shaft *17.6.26.* Flywheel shaft — Thrust shaft — Intermediate shafts — Tube shaft —

Screw shaft — Propeller — Stern tube — Engine seatings — Engines holding down bolts —

Completion of fitting sea connections — Completion of pumping arrangements — Engines tried under working conditions —

Crank shaft, Material *S.M. Ingot steel* Identification Mark *LLOYD'S 16 6540-42* Flywheel shaft, Material — Identification Mark —

Thrust shaft, Material — Identification Mark — Intermediate shafts, Material — Identification Marks —

Tube shaft, Material — Identification Mark — Screw shaft, Material — Identification Mark —

Is the flash point of the oil to be used over 150° F. *Yes.*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *"Temeraire" 41, 121*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This Diesel Engine and its accessories have*

been constructed under Special Survey in accordance with the approved plans and instructions

as well as with the printed Rules. The materials used in the construction are good and the

workmanship is satisfactory. The starting and injection air receivers have been examined when

manufactured and found to be in conformity with the approved plans. They have been tested

by internal hydraulic pressure of 160 Atmos. and found satisfactory. In my opinion the vessel

for which this Engine is intended will be eligible for the record of +LMC [with date]

when this engine and its accessories have been satisfactorily fitted on board and examined

under full working condition. The cylinder jackets have been stamped:

LLOYD'S TEST 6 ATM P.K. 16-21/4/26.

The amount of Entry Fee *4/5. £ 4 : 0 :* When applied for, *5.7.26*

Special ... *4/5. £ 72 : 10 :*

Donkey Boiler Fee ... *£ 4 : 10 :* When received, *5.8.19*

Travelling Expenses (if any) *£ :*

Committee's Minute *FRI. 18 MAR 1927*

Assigned *See Memo 28.8.23*

J.A. Winitzky
Engineer-Surveyor to Lloyd's Register of Shipping.

TUE. 14 JUN 1927
FRI. 19 AUG 1927
TUE. 13 SEP 1927
TUE. 17 JAN 1928
FRI. 9 DEC 1927
FRI. 21 SEP 1928



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