

REPORT ON OIL ENGINE MACHINERY.

No. 1273.

27 JUN 1930

Received at London Office

Writing Report 12th June 1930 When handed in at Local Office 13th June 1930 Port of Bremen

Survey held at Lübeck Date, First Survey 30th November 1929 Last Survey 12th June 1930
Number of Visits 47

on the Single Twin Triple Quadruple Screw vessel Vigred Tons { Gross Net

at Hamburg By whom built Deutsche Werft A.G. Yard No. 141 When built 1929/30
es made at Lübeck By whom made Maschinenfabrik Augsburg-Nürnberg Engine No. 330410 When made 1929/30
y Boilers made at By whom made Boiler No. When made
Horse Power 2650 Owners Messrs. Brünn & v. d. Lippe Port belonging to Tönning
Horse Power as per Rule 980 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
for which vessel is intended

ENGINES, &c. Type of Engines 1 x D5Zu 60/90 23 5/8 35⁷/₁₆ 2 or 4 stroke cycle 2 Single or double acting double
om pressure in cylinders 45 atm Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 5 No. of cranks 5
bearings, adjacent to the Crank, measured from inner edge to inner edge 885 mm Is there a bearing between each crank yes
ions per minute 115 Flywheel dia. 2100 mm Weight 3400 kg Means of ignition Diesel principle Kind of fuel used Diesel oil

Shaft, dia. of journals as per Rule 420 mm as fitted Crank pin dia. 420 mm Crank Webs Mid. length breadth 560 mm Thickness parallel to axis shrunk
eel Shaft, diameter as per Rule 420 mm as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted
Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the { tube { screw } shaft fitted with a continuous liner {

ce 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
er boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
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
liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube
If so, state type Length of Bearing in Stern Bush next to and supporting propeller

eller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet
od of reversing Engines direct by means of compressed air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
red Thickness of cylinder liners 80/77.5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencer water cooled or lagged with
ducting material air space If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

ng Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work
s connected to the Main Bilge Line { No. and Size How driven

st Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size
o independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
s, No. and size:—In Machinery Spaces
lds, &c.

endent Power Pump Direct Suctions to the Engine Room Bilges, No. and size
ll the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions in the Machinery Spaces
om easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

l Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
ey 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
ey 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

pipes pass through the bunkers How are they protected
pipes pass through the deep tanks Have they been tested as per Rule
l Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

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
rtment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from
wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. No. of stages Diameters Stroke Driven by
liary Air Compressors, No. 2 No. of stages 2 Diameters 900/230 mm Stroke 200 mm Driven by electric motors
l Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by
enging Air Pumps, No. 1 Diameter 1380 mm Stroke 600 mm Driven by main crank shaft

liary Engines crank shafts, diameter as per Rule as fitted 130 mm
RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes
he internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces

ere a drain arrangement fitted at the lowest part of each receiver
h Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness
less, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules
ting Air Receivers, No. 1 for aux. mach. Total cubic capacity 125 ltrs. Internal diameter 405 mm thickness 17.5 mm
glass, lap welded or riveted longitudinal joint seamless Material S.M. Steel Range of tensile strength 44-50 Working pressure by Rules 30 atm

IS A DONKEY BOILER FITTED?

PLANS. Are approved plans forwarded herewith for Shafting *Yes, London letter E*
(If not, state date of approval) *27/28. 11. 29*

If so, is a report now forwarded?

Receivers *Yes, London letter E*
15. 4. 30

Separate Tanks

Oil Fuel Burning Arrangements

Donkey Boilers

SPARE GEAR *as per Rules*

The foregoing is a correct description.
Maschinenfabrik Augsburg-Nürnberg A. G.

M. Hammer *K. Sander* Manufacturer.

Dates
of Survey
while
building

During progress of
work in shops - -
During erection on
board vessel - - -
Total No. of visits

30. Nov; 7. 12. 19. Dec; 9. Jan; 22. Feb; 4. 5. 6. 7. 15. 16. 17. 19. 20. 21. 22. 24. 25. 26. 27. March; 2. 3. 4. 5. 10. 11. 12. 14. 15. 16. 17. 25. 26.
29. 30. April; 1. 2. 3. 5. 6. 12. 13. 19. 20

Dates of Examination of principal parts—Cylinders *25. 4. 30*

Lines 17. 4. 30
Covers 16. 4. 30

Pistons *10. 4. 30*

Rods *10. 4. 30*

Connecting rods *11. 4. 30*

Crank shaft *12. 4. 30*

Flywheel shaft *12. 5. 30*

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. Steel*

Identification Mark *LLOYD'S M.K. 3077, 14. 2. 30*

Flywheel shaft, Material *S. M. Steel*

Identification Mark *LLOYD'S M.K. 3078, 14. 2. 30*

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.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

If so, have the requirements of the Rules been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

If so, state name of vessel

Is this machinery duplicate of a previous case *no*

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 Society's Rules and Regulations as well as with the approved plans and instructions thereto. The materials used in the construction are good and the workmanship is satisfactory.*

The main engine has not been tested under working conditions.

The material of the main crankshaft has been tested by the *Germanischer Lloyd*. See London letter E. 27. In my opinion the vessel for which this engine and its accessories are intended will be eligible for the notation of *⬢ LMC* [with date] when the machinery has been satisfactorily fitted on board and tried under full conditions

A copy of this report has been sent to the Hamburg Surveyors.

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute)

The amount of Entry Fee ... £ *4 : 16* : When applied for,
4/5 Special ... £ *99* : *4* : *24. 6. 1930*
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ *2* : *0* : *8/7/30* *16/19/7*

Committee's Minute

Assigned

J. Brown
Engineer Surveyor to Lloyd's Register of Shipping



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Foundation