

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 2035.

Received at London Office

JUL 14 1938

Date of writing Report 8th July 1938 When handed in at Local Office 11. 7. 1938

Port of Bremen

No. in Survey held at 7956

Date, First Survey 3rd April 1937 Last Survey 9th July 1938

Reg. Book.

Number of Visits 129

Single
on the Twin
Triple
Quadruple

Screw vessel

Mtd. Inver sur.

Tons { Gross
Net

Built at Hamburg

By whom built Messrs. Deutsche Kraft 78

No. 203

When built 1938

Engines made at 7956

By whom made Messrs. M. A. H.

Engine No. 690180

When made 1937/38

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 4100

Owners

Port belonging to

Nom. Horse Power as per Rule 1001

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines

K 8 in 68/120

2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 45 kg/cm²

Mean Indicated Pressure 5.6

Diameter of cylinders 680 mm

Length of stroke 1200 mm

No. of cylinders 8

No. of cranks 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

925 mm

Is there a bearing between each crank

yes

Revolutions per minute 115

Flywheel dia. 2100 mm

Weight 4380 kg

Means of ignition die ign.

Kind of fuel used

Crank Shaft, { Solid forged
Semi built dia. of journals
All built

as per Rule

as fitted

Crank pin dia. 460 mm

Crank Webs

Mid. length breadth 580 mm

Mid. length thickness 285 mm

Thickness parallel to axis 285 mm

Thickness around eyehole 205 mm

Flywheel Shaft, diameter

as per Rule

as fitted

460 mm

Intermediate Shafts, diameter

as per Rule

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

Tube 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 }

Bronze 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

propeller boss

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

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

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

shaft If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia.

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface

sq. feet

Method of reversing Engines

by comp. air

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

yes

Means of lubrication

forced

Thickness of cylinder liners 42 mm

Are the cylinders fitted with safety valves

yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No.

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

Bilge Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

How driven

Is the cooling water led to the bilges

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Ballast Pumps, No. and size

Main engine

Power-Driven Lubricating Oil Pumps, including Spare Pump, No. and size

1; 38 m³/h.

Are two independent means arranged for circulating water through the Oil Cooler

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

In Pump Room

In Holds, &c.

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

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

Are the Bilge Suctions in the Machinery Spaces

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

Are 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

Are 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

What pipes pass through the bunkers

How are they protected

What pipes pass through the deep tanks

Have they been tested as per Rule

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

Is 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 compartment to another

Is the 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

Main Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

Scavenging Air Pumps, No.

1; (Kaudern)

Diameter 1380 mm

Stroke 850 mm

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No.

Position

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith

Lloyd's Register
Foundation

W1196-0036

AIR RECEIVERS:—Have they been made under survey ✓ State No. of Report or Certificate ✓

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

Can the internal surfaces of the receivers be examined and cleaned ✓

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

Injection Air Receivers, No. ✓

Cubic capacity of each ✓

Internal diameter ✓

thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓

Material ✓

Range of tensile strength ✓

Working pressure ✓

by Rules ✓

Actual ✓

Starting Air Receivers, No. ✓

Total cubic capacity ✓

Internal diameter ✓

thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓

Material ✓

Range of tensile strength ✓

Working pressure ✓

by Rules ✓

Actual ✓

IS A DONKEY BOILER FITTED? ✓

If so, is a report now forwarded? ✓

Is the donkey boiler intended to be used for domestic purposes only ✓

PLANS. Are approved plans forwarded herewith for Shafting 17K. 9. 36/29K. 6. 38-Receivers ✓

Separate Fuel Tanks ✓

Donkey Boilers ✓

General Pumping Arrangements ✓

Pumping Arrangements in Machinery Space ✓

Oil Fuel Burning Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied not yet ready.

State the principal additional spare gear supplied

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

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1937. April. 3. 4. 21. 22. 26. May. 4. June 8. 9. 23. 28. 30. July. 13. 14. 23. 29. Sept. 10. Nov. 8. 11. 20. Dec. 1. 2. 3. 15. 1938. Jan. 17. 19. 22. 28. Feb. 16. 17. 28. March. 2. 3. 4. 6. 10. 14. 15. 16. 18. 19. 22. 23. 24. 25. 26. 28. 29. 30. April. 1. 2. 4. 5. 6. 7. 8. 9. 11. 12. 13. 14. 15. 19. 20. 21. 22. 23. 25. 26. 27. 28. 29. 30. May. 2. 3. 5. 6. 7. 10. 11. 12. 13. 14. 16. 17. 18. 19. 20. 21. 23. 24. 25. 26. 27. 28. 29. 30. June 1. 2. 3. 4. 7. 8. 9. 10. 11. 13. 14. 15. 17. 18. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. July. 1. 2. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. August. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. September. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. October. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. November. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. December. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. Total No. of visits 129.

Dates of Examination of principal parts—Cylinders 12. 13. 4. 38 Covers 7. 8. 9. 14. 4. 38 Pistons 29. 30. 3. 38 Rods 3. 5. 38. Connecting rods 3. 5. 38.

Crank shaft 14. 20. 21. 4. 38. Flywheel shaft 28. 4. 1. 7. 38. 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 34 12 2 5 7 6 6. 7. 37 Flywheel shaft, Material S. M. steel Identification Mark M. B. 13 127 21. 5. 37.

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

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material ✓ Identification Mark ✓

Identification Marks on Air Receivers ✓

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 ✓

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

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

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓

Is this machinery duplicate of a previous case yes If so, state name of vessel Messrs. Deutsche Reichs-Hamburg, yaw No 601, 202.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This heavy oil engine has been constructed under special survey in accordance with the Soc. Rules and Regulations, as well as with the approved plans, and instructions thereto. The material used in the construction is good, and the workmanship satisfactory.

This engine has not been tested on the makers' test bed.

In our opinion the vessel for which this engine is intended will be eligible for the notation of + L. M. C. (with date) when the whole machinery has been fitted satisfactorily on board, and tried under full working conditions.

The amount of Entry Fee

1/5 RM. 96.00

When applied for,

Special

1/5 2040.40

13. 7. 1938.

Donkey Boiler Fee

£ - : -

When received,

Travelling Expenses (if any)

£ 140.00

17. 8. 1938.

Committee's Minute

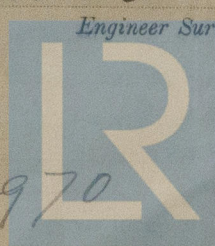
Assigned

FRI 2 DEC 1938

See Name JE 22970

W. Petersen

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation