

REPORT ON OIL ENGINE MACHINERY.

No. 12634.

Date of writing Report 19th Oct 39 When handed in at Local Office 20th Oct. 39 Port of Gothenburg
 No. in Survey held at Gothenburg Date, First Survey 19th January Last Survey 12th Oct. 1939
 Number of Visits 77

Single
 Triple
 Quadruple
 on the Twin Screw vessel
 No. 40560

M/S PONTFIELD.

Gross
 Net

Built at Gothenburg By whom built ERIKSBERGS M.V.A.B. Yard No. 289 When built 1939
 Engines made at Gothenburg By whom made ERIKSBERGS M.V.A.B. Engine No. 226 When made 1939
 Donkey Boilers made at Gothenburg By whom made ERIKSBERGS M.V.A.B. Boiler No. 597-8 When made 1939
 Brake Horse Power 3680 Owners HUNTING & SON, LTD. Port belonging to NEWCASTLE
 Nom. Horse Power as per Rule 644 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES
 Trade for which vessel is intended OPEN SEA SERVICE

OIL ENGINES, &c. Type of Engines Vertical Diesel oil eng. Crosshead type Solid inject. 2 or 4 stroke cycle 2 Single or double acting Double
 Maximum pressure in cylinders 49 kg/cm² Diameter of cylinders 17 1/16" = 450 mm Length of stroke 47 1/4" = 1200 mm No. of cylinders 6 No. of cranks 6
 Mean Indicated Pressure TOP = 6.2 BOTTOM = 6.2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 840 mm Is there a bearing between each crank Yes
 Revolutions per minute 125 Flywheel 3900 kgm² Weights 19520 kgm² Means of ignition Compression Kind of fuel used Diesel oil
 Crank Shaft, { Solid forged
 Semi built
 All built } dia. of journals 360 mm as fitted 360 mm Crank pin dia. 360 mm Crank Webs Mid. length breadth ✓ Thickness parallel to axis 216-224 mm
 Mid. length thickness ✓ Thickness around eye hole 205 mm
 Flywheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as fitted 443 mm Thrust Shaft, diameter at collars as fitted 360 mm
 Tube Shaft, diameter as per Rule ✓ as fitted 450 mm Is the tube shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per Rule 21.4 mm as fitted 22 mm Thickness between bushes as per Rule 16 mm as fitted 22 mm Is the after end of the liner made watertight in the propeller boss Yes
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Liner in one length
 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 Yes
 If so, state type Vickers Veda Gland, Simplex no 3 Length of Bearing in Stern Bush next to and supporting propeller 2180 mm
 Propeller, dia. 5029 mm Pitch 3325 mm No. of blades Four Material Cast iron whether Moveable Yes Total Developed Surface 8.06 m² sq. feet
 Method of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication Forced
 Thickness of cylinder liners 31 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 Self funnel
 Cooling Water Pumps, No. 2 1 freshwater 1 saltwater 175 tons/hour each Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 Bilge Pumps worked from the Main Engines, No. None Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓
 Pumps connected to the Main Bilge Line { No. and Size One bilge pump, 20 tons/hour / 1 ballast pump, 150 tons/hour / 1 duplex, 190 x 150 x 250 mm
 How driven electrically / electrically / steam }
 Is the cooling water led to the bilges No 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 One, 150 tons/hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Two, 175 tons/hour each
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces Four - 3 1/2" In Pump Room None
 In Holds, &c. Two - 2 1/2" from dry cargo hold, One - 2 1/2" from fore pump room, Two - 4" from main pump room
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One - 3 1/2", One - 4", One - 5"
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces Yes
 led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Overboard Discharges above or below the deep water line Above
 Are they 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
 What pipes pass through the bunkers No coal bunkers How are they protected ✓
 What pipes pass through the deep tanks Cargo pipes and heating coils Have they been tested as per Rule Yes
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 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 Yes Is the Shaft Tunnel watertight No tunnel 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. None No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓
 Auxiliary Air Compressors, No. Two No. of stages 2 Diameters 250 & 280 mm Stroke 190 mm Driven by Bus. engines
 Small Auxiliary Air Compressors, No. One No. of stages 2 Diameters 9 cub. feet Stroke at 500 rev. Driven by Steam engine
 What provision is made for first Charging the Air Receivers Small auxiliary air compressor
 Scavenging Air Pumps, No. Two Capacity 290 m³/min Stroke ✓ Driven by the main engine
 Auxiliary Engines crank shafts, diameter as fitted 150 mm No. One 3 cyl. on port side / One 2 cyl. on starboard side Position from machy space
 Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Yes

AIR RECEIVERS:—Have they been made under survey

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

Injection Air Receivers, No. *None* Cubic capacity of each

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Starting Air Receivers, No. *One for aux. engines*

Two for main and aux engines

Total cubic capacity

180 litres
2 x 8 = 16 m³

Internal diameter

370 mm
1600 mm

thickness

14 mm
22.5 mm

Seamless, lap welded or riveted longitudinal joint

Lap welded
Riveted

Material

M-steel

Range of tensile strength

37.8-38.7 kg/mm²
41-47 kg/mm²

Working pressure

40 kg/cm²
25 kg/cm²

IS A DONKEY BOILER FITTED?

Yes, two donkey boilers

If so, is a report now forwarded?

Yes

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

No

PLANS. Are approved plans forwarded herewith for Shafting

No, 7.8.37

Receivers

No, 7.8.37 & 4.9.37

Separate Fuel Tanks

No, 31.5.38

Donkey Boilers

No, 14.10.37

General Pumping Arrangements

No, 25.11.37

Pumping Arrangements in Machinery Space

No, 25.11.37

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes

State the principal additional spare gear supplied

6 fuel valves complete, 1 exhaust top piston valve complete, 1 exhaust bottom piston valve complete, 1 top cylinder liner, 1 bottom cylinder liner, 1 piston, 1 piston rod, 1 pistonrod liner, 1 propeller shaft, two impellers for scavenging air blowers.

The foregoing is a correct description,

Eriksbergs Mek. Verkstads Aktiebolag

Gunnar Engberg

Manufacturer.

Dates of Survey while building
During progress of work in shops--
During erection on board vessel--
Total No. of visits

1939 Jan. 19. Febr. 13. March 14. 21. 23. 28. April 5. 6. 13. 14. 15. 19. 25. 26. 28. May 3. 9. 10. 11. 12. 19. 24. 26. 27. 30. 31. June 3. 5. 9. 13. 19. 22. 28. 30. July 4. 6. 8. 12. 15. 17. 19. 20. 21. 26. 28. Aug. 2. 9. 18. 21. 25. Sept. 19. 25. 26. 1939 July 31. Aug. 14. 28. 31. Sept. 6. 12. 15. 16. 18. 20. 23. 25. 30. Oct. 3. 3. 4. 5. 6. 7. 9. 10. 11. 12.
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Dates of Examination of principal parts—Cylinders *25.4. & 10.5.39.* Covers *25.4. & 10.5.39.* Pistons *9.5.39.* Rods *26.4.39.* Connecting rods *23.3.39.*
Crank shaft *5.4.39.* Flywheel shaft *✓* Thrust shaft *5.4.39.* Intermediate shafts *28.4.39.* Tube shaft *✓*
Screw shaft *22.6.39.* Propeller *31.7.39.* Stern tube *13.2.39.* Engine seatings *20.7.39.* Engines holding down bolts *31.7.39.*
Completion of fitting sea connections *20.7.39.* Completion of pumping arrangements *10.10.39.* Engines tried under working conditions *7.10.39.*
Crank shaft, Material *M-steel* Identification Mark *LLOYD'S 1332-3 T.W. 22.3.39.* Flywheel shaft, Material *✓* Identification Mark *LLOYD'S 2136-7 28.4.39. SA*
Thrust shaft, Material *M-steel* Identification Mark *LLOYD'S 1334 T.W. 22.3.39.* Intermediate shafts, Material *M-steel* Identification Marks *LLOYD'S 2154-5 22.6.39. SA*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *M-steel* Identification Mark *✓*
Identification Marks on Air Receivers *Main, 2 off. Nos 535 & 536 LLOYD'S TEST 40KG WP 25KG SA 26.7.39.*
Aux. No 608 LLOYD'S TEST 80ATH. WP 40ATH. V.S. 21.6.37.

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

Yes

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

Yes

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

No

Is this machinery duplicate of a previous case

Yes

If so, state name of vessel

% Solør % Trondheim.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The main and auxiliary engines of this vessel have been built under special survey and all the requirements of the Rules have been complied with. The shafting as per forging reports attached. Test sheets of donkey boiler and starting air receivers material are also attached. The workmanship is good and the material fulfils the requirements of the Rules. The dimensions are as specified in accordance with the Rules and approved plans. The auxiliary machinery as per special report now sent. The main and auxiliary engines have been tested under working conditions and found to work satisfactorily. The machinery of this vessel is eligible in my opinion to be classed in the Register Book of this Society with notation of % LMC 10.39. Working pressure of donkey boilers 142 lbs/□*

The amount of Entry Fee .. KR : 114:00
Special .. KR : 2037:00
Donkey Boiler Fee .. £ :
START AIR REC. FEE .. KR : 120:00
Travelling Expenses (if any) ..
Committee's Minute
Assigned

When applied for,

30th Oct. 1939

When received,

29. 11. 1939

J. Sjogelin

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation

Certificate (if required) to be sent to: Surveyors Office, Gothenburg

(The Surveyors are requested not to write on or below the space for Committee's Minute.)