

REPORT ON OIL ENGINE MACHINERY.

No. 7689.

MAY 25 1937

Received at London Office

Date of writing Report 24th May 1937 When handed in at Local Office 24th May 1937 Port of Flavie
 No. in Survey held at St Nazaire & Rouen Date, First Survey 26th August 1936 Last Survey 22nd May 1937
 Reg. Book. Number of Visits 28.

67721 on the Single Twin Triple Quadruple Screw vessel Motor Crawler "FINLANDE"
 Tons Gross 1300
 Net 685

Built at Grand quevilly. By whom built Ch. & At. de St Nazaire Yard No. T.8 When built 1937
 Engines made at St Nazaire By whom made Ch. & Ateliers de St Nazaire Engine No. T.8 When made 1937
 Donkey Boilers made at Annam By whom made Cochran & Co Ltd Boiler No. 13357 When made 1936
 Brake Horse Power 1010 Owners Jos. Huret & Co Port belonging to Bordeaux
 Nom. Horse Power as per Rule 212 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended Fishing. 17 1/2 33 7/10

OIL ENGINES, &c. Type of Engines Burmeister & Wain (Licence Patent) or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 55 kgs p. cm² Diameter of cylinders 450 mm Length of stroke 850 mm No. of cylinders 7 No. of cranks 7
 Mean Indicated Pressure 6.500 (kg/cm²)

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 586 mm Is there a bearing between each crank Yes
 Revolutions per minute 175 Flywheel dia. 1.475 Weight 825 kgs Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 295 mm Crank pin dia. 295 mm Crank Webs Mid. length breadth 520 mm Thickness parallel to axis 181 mm
 as fitted 295 mm Mid. length thickness 181 mm shrunk Thickness around eyehole 137 1/2 mm

Flywheel Shaft, diameter as per Rule 282 mm Intermediate Shafts, diameter as per Rule 242 mm Thrust Shaft, diameter at collars as per Rule 300 mm
 as fitted 282 mm as fitted 242 mm as fitted 300 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 268 mm Is the tube shaft fitted with a continuous liner Yes
 as fitted as fitted as fitted 268 mm as fitted Yes

Bronze Liners, thickness in way of bushes as per Rule 17 1/2 mm Thickness between bushes as per Rule 15 mm Is the after end of the liner made watertight in the
 as fitted 17 1/2 mm as fitted 15 mm 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 Yes
 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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft No If so, state type Yes Length of Bearing in Stern Bush next to and supporting propeller 1.360

Propeller, dia. 2.940 Pitch 2.120 No. of blades 4 Material Manganese Bronze whether Moveable No Total Developed Surface 2.770 sq. meters

Method of reversing Engines Compressed Air Reversing Motor Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Aspirator device

Rotary pump Thickness of cylinder liners 34-32-30 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with
 non-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 Exhaust led to funnel

Cooling Water Pumps, No. 2 1 Chain driven Main Engines Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
1 driven by Electric Motor

Bilge Pumps worked from the Main Engines, No. 2 Diameter 155 mm Stroke 142 mm Can one be overhauled while the other is at work Yes
 (each 25 tons) No. and Size 2 (Pistons D=155 mm S=142 mm) 1 Centrifugal pump. 75 tons 1 Centrifugal 25 tons

Pumps connected to the Main Bilge Line How driven Electric Motors
 Is the cooling water led to the bilges Overboard If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
 arrangements Yes

Ballast Pumps, No. and size One Centrifugal pump 75 tons electric drive Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size One Chain driven By Main Engines 36 m³
One electrically driven 36 m³

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 (Piston pump & Electric pump. 50 tons each)

Pumps, No. and size:—In Machinery Spaces Two 82 mm. One 64 mm. Two (Hoses) 55 mm In Pump Room Yes

In Holds, &c. One aft. Hold. One forward Hold. One Magazine. One Chain Locker (and peak)
64 mm. 64 mm. 64 mm. 64 mm. Two 82 mm. One 64 mm.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Yes Are the Bilge Suctions in the Machinery Spaces Yes

Are all the Bilge Suction pipes in Holds and Tunnel Wells fitted with strum-boxes Yes led from easily accessible mud-boxes, placed above the level of the working floor, with draught tail pipes to the bilges Yes

Are all Sea Connections fitted direct on the skin of the ship Fitted over tank top with Cast steel Standard fitted on the Outer plating. Are they fitted with Valves or Cocks Kingston Valves

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 Yes

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 None How are they protected Yes

What pipes pass through the deep tanks None 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 Yes Is it fitted with a watertight door Yes worked from Yes

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

Main Air Compressors, No. None No. of stages 2 Diameters 280 mm Stroke 190 mm Driven by B.W. auxiliary Motors

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 75-30 Stroke 95 mm Driven by Hand

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 75-30 Stroke 95 mm Driven by Hand

Scavenging Air Pumps, No. 2 Diameter 150 mm Stroke 150 mm Driven by Hand

Auxiliary Engines crank shafts, diameter as per Rule 150 mm as fitted 150 mm No. 2 Position In Engine Room on Pk 5d Side platforms.

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Total No.
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COLLISIO
AFTER PI
STEEL

AIR RECEIVERS:—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 Yes. Is a drain fitted at the lowest part of each receiver Yes.
High Pressure Air Receivers, No. None Cubic capacity of each ✓ Internal diameter ✓ thickness ✓
Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure ✓
Starting Air Receivers, No. One Total cubic capacity 6 Cubic Meters Internal diameter 1" 500 thickness 20 mm
Seamless, lap welded or riveted longitudinal joint ✓ Material Steel Range of tensile strength 43 1/2 Ton Working pressure by Rules 23 kg
Actual 25 kg. p. sq. in.

IS A DONKEY BOILER FITTED?

Is the donkey boiler intended to be used for domestic purposes only Yes. If so, is a report now forwarded? Yes
PLANS. Are approved plans forwarded herewith for Shafting Yes. Receivers Yes Separate Fuel Tanks Yes
(If not, state date of approval) Donkey Boilers Yes General Pumping Arrangements Yes Pumping Arrangements in Machinery Space Yes
Oil Fuel Burning Arrangements Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes.
State the principal additional spare gear supplied For the Propelling Motor: One Complete Air Inlet Valve. 4 Valves for Exhaust Valve
One Complete Starting Air Valve 1/2 Set of Main Bearing Bolts.

For the Auxiliary Motors: One Complete Fuel Valve. 5 Complete Exhaust Valves. 2 Valves & 4 Springs
One Complete Starting Air Valve. 2 pistons 1 Bottom end Brasses. 1 Main Bearing Brasses.
One Propeller Shaft. One Propeller.

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building
During progress of work in shops: 1936 Aug. 26-27. Sept. 13. (Oct.) 3-17-22-26. Dec. 8-15-29. 1937 Jan. 13-20 - Feb. 5-19.
During erection on board vessel: 1936 Dec. 29. Jan. 7-9. Feb. 10 Mar. 18. Apr. 6-23. May. 4-11-14-18-21-22
Total No. of visits 28

Dates of Examination of principal parts—Cylinders Dec. 8-15. Covers Dec. 8-15. Pistons Jan. 13-20 Rods ✓ Connecting rods Oct. 14. Jan. 13-20
Crank shaft Dec. 14. Apr. 26. (Flywheel shaft ✓ Thrust shaft) Sept. 13. Nov. 17 Intermediate shafts Sept. 9. Nov. 17 Tube shaft ✓
Screw shaft Sept. 13. Nov. 17 Propeller Jan. 8 Stern tube Nov. 17 Jan. 8 Engine seatings Aug. 27. Nov. 9 Engines holding down bolts Apr. 6-4
Completion of fitting sea connections Feb. 10. Completion of pumping arrangements Apr. 23. Engines tried under working conditions ✓ Dock trial ✓
Crank shaft, Material Forged Steel Identification Mark LR. H. 7. 5115 Flywheel shaft, Material ✓ Identification Mark ✓
Thrust shaft, Material Forged Steel Identification Mark LR. H. 7. 478 Intermediate shafts, Material Forged Steel Identification Marks LR. H. 7. 475
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material Forged Steel Identification Mark LR. H. 7. 449

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 No 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 No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The Main Engines and the auxiliary machinery

The Air Receiver and pipes have been constructed under Special Survey in accordance with the approved plans
The recommendations made in the Secretary's letters and in other respects in conformity with the Rules.

The Materials & Workmanship are good and satisfactory.

The Pumping Arrangements, the Oil fuel burning arrangements, Oil fuel tanks pipes & fittings Control of valves
pumps are in accordance with the Rules Requirements.

The Main Engine & Auxiliary Motors have been securely fixed on board. The Stern tube and Sea Connections
have been satisfactorily fitted.

The Engine Room is efficiently ventilated. Steam pipes for fire extinguishing & 3 Fire extinguishers
(Foam fluid type. One 135 litres Capacity. Two 9 litres Capacity each) have been installed in the Machy Space.

The Main Engine and auxiliaries have been tested under Working Conditions and found Satisfactory

The Machinery of this Vessel is eligible in my opinion to have the notation + L.M.C. 5-3
in the Register Book

The amount of Entry Fee £5: 500.- When applied for, 24-5-1937
Special Survey £5: 6685
Donkey Boiler Fee £5: 120
Late fees (3-1-37, 2-5-37) £5: 260
Travelling Expenses (if any) £5: 2410
Total £5: 9915
When received, 6630p 497.37 £107.15/10
FRI 30 JUL 1937

Committee's Minute

Assigned + done 5.37 Air try cc
Subser DB 100 lb

Rpt. 9a.

Port of

Hawze

Continuation of Report No. 7689 dated 24th May 1937, on the

Motor Brawler "FINLANDE"

Survey held at Rouen on the 10th Feb. 23rd Apr 14th May 1937
on the Donkey Boiler No 13357
(Completion of Glasgow Report No 57549.

Donkey Boiler erected on board and tested in position under
hydraulic pressure to 200 lbs. per sq. inch.

Boiler securely fixed to the structure of the vessel by
substantial Rolling Stays.

Steam & feed pipes manufactured and tested according to
Rules requirements.

Oil Burning plant fitted according to Rule Requirements.
Fire extinguishing apparatus fitted on the stowhold platform

Boiler suitably lagged. Smoke box doors shielded
Uptake joints made air tight. Funnel satisfactory

Safety valves fitted with easing gear.

Safety valves adjusted under steam to 100 lbs. p. sq. inch
Accumulation test carried out. Satisfactory.

This Boiler having been built and fitted in accordance
with the Society's Rules and Requirements is eligible
in my opinion to have the notation D.B.S. 5-37 in the
Register Book.

J. Moitet

Engineer Surveyor to Lloyd's Register
of Shipping