

REPORT ON OIL ENGINE MACHINERY.

No. 12575.

3 OCT 1939

Received at London Office

12th Sept. 1939 When handed in at Local Office 18th Sept. 1939 Port of *Lithuania*
 Date, First Survey 2nd July Last Survey 29th Aug. 1939
 Number of Visits 2

Survey held at *Trollhattan*
 on the *888* Single *"HELLESUND"* Screw vessel
 Tons Gross 366 Net 177
 Yard No. - When built 1916
 Engine No. 1093 When made 1939
 Boiler No. - When made -
 Port belonging to *OSLO*
 Is Electric Light fitted -

By whom built *JOHS. BERG*
 By whom made *A.B. NYDQVIST & HOLM*
 By whom made -
 Owners *D/S A/S VERITAS*
 Is Refrigerating Machinery fitted for cargo purposes -
 Brake Horse Power 455
 Indicated Horse Power as per Rule 118.5
 Trade for which vessel is intended -

ENGINES, &c. Type of Engines *Heavy Oil Engine* 2 or 4 stroke cycle 2 Single or double acting *Single*
 Maximum pressure in cylinders *45 kg/cm²* Diameter of cylinders *200 mm* Length of stroke *420 mm* No. of cylinders 7 No. of cranks 7
 Indicated Pressure *4.35 kg/cm²* Is there a bearing between each crank *Yes*
 Kind of fuel used *Diesel Oil*
 Mean of bearings, adjacent to the Crank, measured from inner edge to inner edge *337 mm*
 Revolutions per minute *325* Flywheel dia. *960 mm* Weight *545 kg.*
 Means of ignition *Compression* Kind of fuel used *Diesel Oil*
 Crank pin dia. *160 mm* Crank Webs Mid. length breadth *230 mm* Mid. length thickness *86 mm*
 Thickness parallel to axis *shrink* Thickness around eye-hole *shrink*
 Thrust Shaft, diameter at collars *as per Rule 120.5 mm*
 as fitted *139.9 mm*

Intermediate Shafts, diameter *as per Rule*
 as fitted *as fitted*
 Screw Shaft, diameter *as per Rule*
 as fitted *as fitted*
 Is the tube shaft fitted with a continuous liner *Yes*
 Is the after end of the liner made watertight in the *Yes*
 Thickness between bushes *as per Rule*
 as fitted *as fitted*
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *Yes*
 Is an approved Oil Gland or other appliance fitted at the after end of the tube *Yes*
 Length of Bearing in Stern Bush next to and supporting propeller *Yes*
 Total Developed Surface *sq. feet*

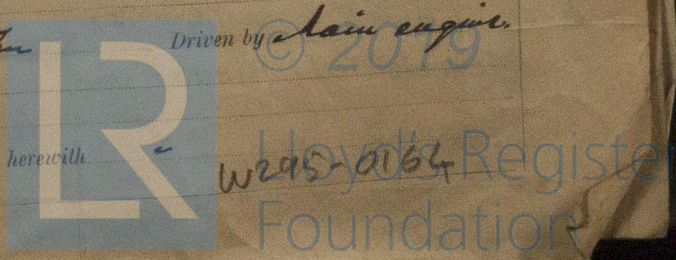
Propeller, dia. *2100 mm* Pitch *45°* No. of blades *3* Material *Steel* whether Moveable *Yes*
 Method of reversing Engines *Direct with* Is a governor or other arrangement fitted to prevent racing of the engine *Yes*
 Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers water cooled or lagged with *Yes*
 Thickness of cylinder liners *22 mm* Are the exhaust pipes and silencers water cooled or lagged with *Yes*
 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 *Yes*
 Cooling Water Pumps, No. *One* 320 lit/min. Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*
 Diameter *95 mm* Stroke *70 mm* Can one be overhauled while the other is at work *Yes*
 Pumps worked from the Main Engines, No. *One*

Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*
 Diameter *95 mm* Stroke *70 mm* Can one be overhauled while the other is at work *Yes*
 Pumps connected to the Main Bilge Line *No. and Size*
 How driven *How driven*
 If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping *Yes*
 The cooling water led to the bilges *Yes*
 Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *Two 36 lit/min. each.*
 Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge *Yes*
 In Pump Room *Yes*

Oil Cooler *Yes*
 Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge *Yes*
 In Pump Room *Yes*
 Are the Bilge Suctions in the Machinery Spaces *Yes*
 Are they fitted with Valves or Cocks *Yes*
 Are the Overboard Discharges above or below the deep water line *Yes*
 Are the Blow Off Cocks fitted with a spigot and brass covering plate *Yes*
 How are they protected *Yes*
 Have they been tested as per Rule *Yes*

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 Are they fitted with Valves or Cocks *Yes*
 Are the Overboard Discharges above or below the deep water line *Yes*
 Are the Blow Off Cocks fitted with a spigot and brass covering plate *Yes*
 How are they protected *Yes*
 Have they been tested as per Rule *Yes*
 Is the Shaft Tunnel watertight *Yes*
 Is it fitted with a watertight door *Yes*
 worked from *Yes*
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 worked from *Yes*



AIR RECEIVERS:—Have they been made under survey *Yes* State No. of Report or Certificate *2476*
Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes*
Can the internal surfaces of the receivers be examined and cleaned *Yes* Is a drain fitted at the lowest part of each receiver *Yes*
Injection 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. *Two* Total cubic capacity *2x400 = 800 litres* Internal diameter *480 mm* thickness *14 mm*
Seamless, lap welded or riveted longitudinal joint *Welded* Material *Stl Steel* Range of tensile strength *35-40 kg/cm²* Working pressure *Actual 2*

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 *14.6.39 & 17.7.39* Receivers *14.6.39* Separate Fuel Tanks *-*
(If not, state date of approval)
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 *Yes*
State the principal additional spare gear supplied *-*

The foregoing is a correct description,
NYDQVIST & HOLM ÅSTERÖLÅG Manufacturer.
Dates of Survey while building { During progress of work in shops *July 3 Aug 29 1939*
{ During erection on board vessel *-*
Total No. of visits *2*
Dates of Examination of principal parts—Cylinders *3.7.39* Covers *3.7.39* Pistons *3.7.39* Rods *-* Connecting rods *-*
Crank shaft *3.7.39* Flywheel shaft *-* Thrust shaft *-* Intermediate shafts *-* Tube shaft *-*
Screw shaft *-* Propeller *-* Stern tube *-* Engine sealings *-* Engines holding down bolts *-*
Completion of fitting sea connections *-* Completion of pumping arrangements *-* Engines tried under working conditions *29*
Crank shaft, Material *Stl Steel* Identification Mark *6723/9408* Flywheel shaft, Material *-* Identification Mark *-*
Thrust shaft, Material *-* Identification Mark *31.5.1939* Intermediate shafts, Material *-* Identification Marks *-*
Tube shaft, Material *-* Identification Mark *-* Screw shaft, Material *-* Identification Mark *-*
Identification Marks on Air Receivers *Nº 7831/7832*
LLOYD'S TEST 50 KG.
W.P. 25 kg.
K.A. 15.6.39.

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 *-*
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 *No*
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. *This main engine has been built under our Survey. The crank shaft as per Germanischer Lloyd's report attached. The results of the certificate have been confirmed by of Brinell tests and found in order (Please see Secretary's letter dated 21 June inst. E). The workmanship is good. The dimensions are as specified and in accordance with the Rules and approved plans. The engine has been under full working power on the test bed and found to work satisfactorily. This engine is eligible in my opinion to be classed in the Registry Book with notation of LMC with date without the distinguishing mark. It is stated, that this engine will be fitted or bored at Abo near Oulu. A copy of this report has been sent to Oulu.*

The amount of Entry Fee .. £ : : When applied for,
Special 475 : 00 18th Sept. 1939
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) *Mr.* : 20 : 00 19

Sten Johansson
Engineer Surveyor to Lloyd's Register
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Committee's Minute
Assigned *See App App. 2837*

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