

REPORT ON OIL ENGINE MACHINERY.

No. 3389

Date of writing Report 4/11 1949 When handed in at Local Office 4/11 1949 Port of Bergen
 No. in Survey held at Bergen Date, First Survey 30th June Last Survey 15th July 1949
 Reg. Book. 0400 on the ^{Single} Screw vessel "NORSTRAUM" ^{Quadruple}
 Built at Thorskog By whom built P. Larson Yard No. 576688/93 When built 1892
 Engines made at Cologne By whom made H. Klockner-Humboldt-Deutz A/G Engine No. When made 1938
 Key Boilers made at By whom made Boiler No. When made
 Brake Horse Power 300 Owners Prodhene Utvikens Rederi Port belonging to Bergen
 N. Power as per Rule 55 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Made for which vessel is intended Fishing and North Sea & European Coasting Service

ENGINES, &c. — Type of Engines Heavy oil engine 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 240 mm Length of stroke 360 mm No. of cylinders 6 No. of cranks 6
 Indicated Pressure 6.6 kg/cm² Ahead Firing Order in Cylinders Span of bearings, adjacent to the crank, measured
 inner edge to inner edge 257 mm Is there a bearing between each crank Yes Revolutions per minute 500
 Wheel dia. 1000 mm Weight 1050 kg Moment of inertia of flywheel (16 lbs. in² or Kg. cm²) Means of ignition Compression Kind of fuel used Diesel
 Crank pin dia. 145 mm Crank webs Mid. length breadth 250 mm Thickness parallel to axis
 Mid. length thickness 64 mm Shrunk Thickness around eyehole
 Wheel Shaft, diameter 140 mm Intermediate Shafts, diameter 133 mm Thrust Shaft, diameter at collars
 Shaft, diameter 149 mm Is the ^{tube} shaft fitted with a continuous liner No
 Liners, thickness in way of bushes Thickness between bushes Is the after end of the liner made watertight in the
 shell boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
 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-
 flammable 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
 tube shaft No If so, state type Length of bearing in Stern Bush next to and supporting propeller 550 mm
 Propeller, dia. 1300 mm Pitch 704 mm No. of blades 3 Material ^{stainless steel} whether moveable No Total developed surface 4.5 sq. feet
 Moment of inertia of propeller (16 lbs. in² or Kg. cm²) Kind of damper, if fitted
 of reversing Engines Direct by hand Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched Yes Means of
 operation Forced Thickness of cylinder liners 18 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled
 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
 into the engine Cooling Water Pumps, No. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 Pumps worked from the Main Engines, No. One Diameter 100 mm Stroke 60 mm Can one be overhauled while the other is at work
 Pumps connected to the Main Bilge Line No. and size 1 - 100 mm x 60 mm stroke 1 - 15 T/hr.
 How driven By Main engine Belt driven from aux. engine
 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
 Oil Pumps, No. and size 1 - 15 T/hr. Gear wheel Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 - 1 tooth wheel pump
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary
 pumps, No. and size: — In machinery spaces 2 - 2" In pump room
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 - 2"
 Are the bilge suction pipes in holds and tunnel well fitted with strum-bones Yes Are the bilge suction 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 No (Strainers fitted)
 All Sea Connections fitted direct on the skin of the ship Yes Are they fitted with valves or cocks Both Are they fitted
 sufficiently high on the ship's side to be seen without lifting the platform plates No Are the overboard discharges above or below the deep water level 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
 Are the pipes pass through the bunkers Are they protected
 Are the 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 other fittings accessible at all times Yes
 Is an arrangement of valves or 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 Is it fitted with a watertight door worked from
 On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 Air Compressors, No. One No. of stages Two diameters 145/60 mm stroke 60 mm driven by main engine
 Auxiliary Air Compressors, No. No. of stages diameter stroke driven by
 All Auxiliary Air Compressors, No. One No. of stages 2 diameters 70 mm stroke 100 mm driven by aux. engine
 Is provision made for recharging the air receivers
 Ventilating Air Pumps, No. diameter stroke driven by
 Auxiliary Engines crank shafts, diameter as per Rule No. 1 - 4 cylinder Paxman
 Have the auxiliary engines been constructed under special survey No Is a report sent herewith

AIR RECEIVERS. *Have they been made under survey?* No. State No. of report or certificate. Yes
Is each receiver, which can be isolated, fitted with a safety valve as per Rules? Yes
Can the internal surfaces of the receivers be examined and cleaned? Yes
Injection Air Receivers, No. ☒ Cubic capacity of each ☒ Internal diameter ☒ thickness ☒
Seamless, welded or riveted longitudinal joint ☒ Material ☒ Range of tensile strength ☒ Working pressure ☒
Starting Air Receivers, No. *Two* ☒ Total cubic capacity *About 1000 Litres* Internal diameter *430 & 453 mm* thickness *12 mm*
Seamless, welded or riveted longitudinal joint *Lap welded* Material *Steel* Range of tensile strength ☒ Working pressure *30 kg/cm²* Actual ☒

IS A DONKEY BOILER FITTED? No. 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? *Yes in duplicate* ☒
Donkey boilers ☒ General pumping arrangements ☒ Pumping arrangements in machinery space ☒
Oil fuel burning arrangements ☒
Have Torsional Vibration characteristics been approved? No. Date of approval ☒

SPARE GEAR.

Has the spare gear required by the Rules been supplied? *Not examined* ☒
State the principal additional spare gear supplied ☒

The foregoing is a correct description, ☒ Manufacturer. ☒

Dates of Survey *During progress of work in shops - - -*
During erection on board vessel - - - 30/6, 1/7, 4/7, 5/7, 11/7, 12/7, 13/7, 15/7 - 49
Total No. of visits *8*
Dates of examination of principal parts - Cylinders *1/7* Covers *1/7* Pistons *1/7* Rods *1/7* Connecting rods *1/7*
Flywheel shaft *1/7* Thrust shaft *1/7* Intermediate shafts *1/7* Tube shaft *1/7*
Propeller *1/7* Stern tube *4/7* Engine seatings *1/7* Engine holding down bolts *1/7*
Completion of pumping arrangements ☒ Engine tried under working conditions ☒
Crank shaft, material *S. M. Steel* Identification mark ☒ Flywheel shaft, material *S. M. Steel* Identification mark ☒
Thrust shaft, material *" "* Identification mark ☒ Intermediate shafts, material *" "* Identification marks ☒
Tube shaft, material ☒ Identification mark ☒ Screw shaft, material *S. M. Steel* Identification mark ☒
Identification marks in air receivers ☒

Welded receivers state Makers' Name ☒
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? ☒
Description of fire extinguishing apparatus fitted *1 Chemical Fire extinguishing Apparatus in engine room & Deck workshop*
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 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 machinery has been examined as detailed in Rpt. 9. The owners state the survey will be completed before the end of December next. Plans of pumping arrangements and electrical installation will be submitted. The pumping and oil fuel piping arrangements found not in accordance with British Corporation Rules, but in view of the special circumstances of this case and the inconvenience caused the owners through the mismanagement by M. A. Andersen, the former non-exclusive Surveyor to British Corporation at Bergen it has been recommended that all outstanding items be dealt with before the end of December next and that this vessel's machinery receive the notation M.B.S. with date when the survey and outstanding items have been completed. Screw shaft to renew next docking.

The amount of Entry Fee ... £ ...
Part Special ... £ 120.-
Donkey Boiler Fee ... £ ...
Travelling Expenses (if any) £ 14.-
When applied for 16/8 1949
When received 26/8 1949
B. J. Watowick / M. A. Bride.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned



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