

REPORT ON OIL ENGINE MACHINERY.

No. 15784

Date of writing Report 19... When handed in at Local Office 16/7 1928 Port of Antwerp Received at London Office 17 JUL 1928 5 SEP 1928

No. in Survey held at Ghent Reg. Book. Date, First Survey 9-5-27 Last Survey 13-6-1928 Number of Visits 24

on the ~~Triple~~ ^{Single} Screw vessel "Brunswick"

Built at Greenock By whom built Scotts, L.B. & Co. Ltd. Yard No. 534 When built 1928

Engines made at Ghent By whom made Soc. d'Electricite de mecanique Engine No. 4009 When made 1928

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power each 750. Total 3000. Owners Atlantic Refining Co. Port belonging to P. O. O. O.

Nom. Horse Power as per Rule 888. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Foreign

IL ENGINES, &c.—Type of Engines (4 off) Ingervoll-Rand Diesel 2 or 4 stroke cycle 4 St Single or double acting Single

Maximum pressure in cylinders 540 lb Diameter of cylinders 495 mm Length of stroke 610 mm No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 559 mm Is there a bearing between each crank Yes

Revolutions per minute 225. Flywheel dia. 2210 mm Weight 5.500 Kgs. Means of ignition Solid Injet Kind of fuel used Fuel oil

Crank Shaft, dia. of journals as per Rule as fitted 280 mm Crank pin dia. 292 mm Crank Webs Mid. length breadth 405 mm Thickness parallel to axis Mid. length thickness 162 mm Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted 250 mm-260-280 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 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 Non reversible Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

greased Lubric. Thickness of cylinder liners none Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material water-cooled. 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

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size one to each motor

Are two independent means arranged for circulating water through the Oil Cooler one to each motor. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

pumps, No. and size:—In Machinery Spaces

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

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

Do all pipes pass through the bunkers. How are they protected.

Do all 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

apartment to another. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from

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

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

All Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Revolving Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

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

Are the internal surfaces of the receivers be examined. What means are provided for cleaning their inner surfaces

Are there a drain arrangement fitted at the lowest part of each receiver

Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Are they less, lap welded or riveted longitudinal joint. Material Range of tensile strength Working pressure by Rules

Revolving Air Receivers, No. Total cubic capacity Internal diameter thickness

Are they less, lap welded or riveted longitudinal joint. Material Range of tensile strength Working pressure by Rules

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *yes.*
(If not, state date of approval)

Receivers Separate Tanks

Donkey Boilers General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

SOCIÉTÉ D'ÉLECTRICITÉ & DE MÉCANIQUE

PROCEDES INOCCOMMUNES connect descriptions

SOCIÉTÉ ANONIME

Le Directeur Administratif,

Le Directeur des Usines, :

Manufacturer.

J. M. Ingot Steel *W. Wigney*

Dates of Survey while building
 During progress of work in shops - - 1927
 During erection on board vessel - - - 1928
 Total No. of visits

Dates of Examination of principal parts - Cylinders 29/10-24/12 1927
 Covers 19/1-13/4 1928
 Pistons 14/1-2/3-14/4 28
 Rods 19/1-24/3-14/4 28
 Connecting rods 19/1-24/3-14/4 28
 Crank shaft 23/8-10/10-8/11 27
 Flywheel shaft 1-12-27
 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 *Yes in the works*
 Crank shaft, Material *S.M. Ingot Steel* Identification Mark *see below*
 Flywheel shaft, Material *S.M. Ingot Steel* Identification Mark *(2) 439 - (2) 440 F.L.R. 1-12-28*
 Thrust shaft, Material Identification Mark
 Intermediate shafts, Material Identification Marks
 Tube shaft, Material Identification Mark
 Screw shaft, Material Identification Mark

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

Is this machinery duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. *These four motors have been constructed under survey, and the materials tested in accordance with the Society's Rules. All cylinder water jackets & cylinder covers have been tested by hydraulic pressure as per rule requirements and found same tight. The workmanship is good and the motors have been tried under working conditions in the works, the machinery was afterwards opened out and examined and found all in good condition. The machinery is eligible in my opinion to be classed in the Society's Register Book and to have record of S.M.C. with date when fitted and tried on board the vessel.*

Mark on crank shafts:

Mark on Motor Bed plate.

1 st Motor: Cyl. N: 4009/14 = LLOYD'S N: 526 DCB. 22.8.27	LLOYD'S. N: 504. F.L.R. 28.2.28.
2 nd " " N: 4015/20 = LLOYD'S. N: 2. F.L.R. 10.10.27	LLOYD'S. N: 505. F.L.R. 7.4.28.
3 rd " " N: 4021/26 = LLOYD'S. N: 149 AB 8-11-27	LLOYD'S. N: 506. F.L.R. 15-5-28.
4 th " " N: 4027/32 = LLOYD'S. N: 148 AB. 8.11.27	LLOYD'S. N: 507. F.L.R. 9-6-28.

The amount of Entry Fee ... £13166.50
 Special Fees ... £273.40
 Donkey Boiler Fee ...
 Travelling Expenses (if any) £1632-
 When applied for, 6-7-1928
 When received, 11-7-1928

J. L. Rabaez
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned *See Gen. Rpt No. 18952*



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