

REPORT ON OIL ENGINE MACHINERY.

No. 7054
21 MAY 1930

Received at London Office

Date of writing Report 16-5-30 When handed in at Local Office 20-5-30 Port of Manchester

No. in Survey held at Reg. Book. Keighley Date, First Survey 4-6-29 Last Survey 15-5-1930 Number of Visits 7

on the ~~Triple~~ ~~Quadruple~~ ^{Single} Screw vessel

Tons ^{Gross} _{Net}

Built at Knottingley By whom built Messrs John Harber Ltd Yard No. 34 When built
Engines made at Keighley By whom made Messrs H. Widdop & Co. Ltd Engine No. 2899 When made 1930
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 150 Owners Port belonging to
Nom. Horse Power as per Rule 43 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which vessel is intended

OIL ENGINES, &c. Type of Engines Vertical, Solid Injection, Reversing, Air Starting, 2 or 4 stroke cycle 2, Single or double acting Single

Maximum pressure in cylinders 600 lbs/sq. Diameter of cylinders 11 1/2" Length of stroke 13 1/2" No. of cylinders 3 No. of cranks 3

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 16 3/4" Is there a bearing between each crank Yes

Revolutions per minute 330 Flywheel dia. 40" Weight 20 1/2 cwt. Means of ignition Heat of compression Fuel used Heavy Oil

Crank Shaft, dia. of journals as per Rule 6 3/4" Crank pin dia. 6 3/4" Crank Webs Mid. length breadth 9" Mid. length thickness 3 3/4" Thickness parallel to axis Solids
as fitted 6 3/4" shrunken Thickness around eyehole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 4 1/2" Thrust Shaft, diameter at collars as per Rule 5 1/4" 4 1/4" Approved

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 4 1/2" Is the shaft fitted with a continuous liner None

Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per rule 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 22 3/4"

Propeller, dia. 52" Pitch 38" No. of blades 3 Material Cast Iron whether Moveable Solid Total Developed Surface 6.2 sq. feet

Method of reversing Engines Hand shaft driven Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

Are the cylinders fitted with safety valves Yes Are the exhaust manifolds water cooled or lagged with non-conducting material WATER COOLED

Are the exhaust pipes and elbows water cooled or lagged with non-conducting material WATER COOLED

Cooling Water Pumps, No. One on engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. One on engine Diameter 3 1/2" Stroke 3" 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 TWIN PLUNGER POMP 1 1/4" x 3" stroke ONE SIGHT FEED LUBRICATOR POMP

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces

In 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 led 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

What pipes pass through the bunkers How are they protected

What 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 compartment to another

Is the Shaft Tunnel watertight 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. One on engine No. of stages 2 Diameters 2 3/4" & 6" Stroke 3" Driven by crank shaft extension

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

Small Auxiliary Air Compressors, No. One No. of stages 2 Diameters 2 3/4" & 6" Stroke 3" Driven by Widdop VBI Engine

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule 2 3/4" Approved 1 cy 5 1/4" - 6"

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

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Plug in ends

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

High Pressure Air Receivers, No. Not fitted Cubic capacity of each Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Starting Air Receivers, No. 3 (224082 & 224083) Total cubic capacity 21.66 CUB. FT. Internal diameter 12 1/2" thickness 4" sides 1" centre of base

Seamless, lap welded or riveted longitudinal joint Material Mild Steel Range of tensile strength 28-32 tons Working pressure by Rules 4.60 lbs/sq.

CHESTERFIELD TYPE

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 Yes.

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR 3 Piston rings. 3 Compressor rings.

Complete set of springs.
Set of rubber & fibre joints.
Two bilge pump valves.
Two circulating pump valves.
Three steel spray pipes.

The foregoing is a correct description,
For H. WIDDOP & COMPANY LTD.

J. Macneil Manufacturer.
DIRECTOR

Dates of Survey while building
During progress of work in shops - 4/6/29, 13/6/29, 20/8/29, 5/9/29, 30/10/29, 14/3/30, 15/5/30.
During erection on board vessel -
Total No. of visits

Dates of Examination of principal parts - Cylinders 30-10-29 Covers 30-10-29 Pistons 30-10-29 Rods 13-6-29
Connecting rods 5-9-29
Crank shaft 4-6-29 20-8-29 Flywheel shaft ✓ Thrust shaft 5-9-29 Intermediate shafts 14-3-30 Tube shaft ✓
Screw shaft 14-3-30 Propeller Stern tube Engine seatings Engines holding down bolts

Completion of filling sea connections Completion of pumping arrangements Engines tried under working conditions in shop 15-5-30.
Crank shaft, Material Mild Steel Identification Mark N° 1518 CF Flywheel shaft, Material Identification Mark
Thrust shaft, Material Mild Steel Identification Mark N° 374 CF Intermediate shafts, Material Mild Steel Identification Marks N° 12 CF
Tube shaft, Material Identification Mark Screw shaft, Material Mild Steel Identification Mark N° 12 CF

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

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

If so, have the requirements of the Rules been complied with

Is this machinery duplicate of a previous case Yes If so, state name of vessel West of Harlow Yard No. 22 Mch. Report N° 6940.

General Remarks (State quality of workmanship, opinions as to class, &c. The above main engine of Widdop Type ZH3, and one Widdop VBI Type single cylinder solid injection vertical engine N° 2943, direct coupled to an electric construction base dynamo N° 76300 of 100 volts, 60 amps, 6K.W. at 800 R.P.M., a 2" centrifugal pump bolted on top of dynamo driven by means of a chain off main shaft and a two stage air compressor clutch coupled to the opposite end of the engine, crank shaft have been built under Special Survey, and the materials tested in accordance with the rules of this Society. The materials so far as can be seen are sound and the workmanship is good. The engine proved satisfactory under shop test on full load, the main engine manoeuvred well. These engine are in my opinion eligible for the notation of L.M.C. with date when fitted on board the vessel in accordance with the rules requirements.

The amount of Entry Fee £2 : 0 : When applied for,
Special ... £13 : 12 : 20-5-1930
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £1 : 6 : 6-June-1930.

J. T. Campbell
Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 11 NOV 1930

Committee's Minute
Assigned See Minute on F.E.P.
Full No 41132
TUE. 9 SEP 1930
Con. W. to Hull - S. H. 16.

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