

REPORT ON OIL ENGINE MACHINERY.

Received at London Office 12 MAR 1937

Date of writing Report 22nd FEB 1937 When handed in at Local Office 19 Port of BIRMINGHAM

No. in Survey held at STAFFORD Date, First Survey 21st JAN 1937 Last Survey 10th FEB 1937
Reg. Book. Number of Visits 3

on the ~~Triple~~ ^{Single} Screw vessel GRAB HOPPER BARGE "MARY SOUTHWELL"
~~Quadruple~~ ^{Handborough} ~~Swansea~~ ^{Swansea} Tons } Gross ✓
Net ✓

Built at STAFFORD By whom built W.H. DORMAN & CO. LTD. Yard No. 30390 When built 1937
Engines made at STAFFORD By whom made W.H. DORMAN & CO. LTD. Engine No. 30390 When made 1937
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 38 @ 1200 REVS. Owners J.S. WATSON (GAINSBOROUGH) Port belonging to
Nom. Horse Power as per Rule 5.56 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which vessel is intended RIVER PURPOSES 4 3/4 7 1/2

OIL ENGINES, &c.—Type of Engines DORMAN-RICARDO TYPE 2 R.B.L. 2 or 4 stroke cycle 4 Single or double acting SINGLE.

Maximum pressure in cylinders 850 LB/SQ" Diameter of cylinders 120 mm Length of stroke 180 mm No. of cylinders 2 No. of cranks 2
Mean Indicated Pressure 120 LB/SQ"

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 131 mm Is there a bearing between each crank YES
Revolutions per minute 1200 Flywheel dia. 2'-0" Weight 1.8 TONS Means of ignition COMPRESSION Kind of fuel used DIESEL OIL (LIGHT)

Crank Shaft, dia. of journals as per Rule 3 1/8" Crank pin dia. 2 1/2" Crank Webs Mid. length breadth 4 5/8" Thickness parallel to axis ✓
as fitted 3 1/8" Mid. length thickness 1 5/16" shrunk Thickness around eyehole ✓

Flywheel Shaft, diameter as per Rule 3 1/8" Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted 3 1/8" - SEE CRANKSHAFT. as fitted Thrust Shaft, diameter at collars as fitted

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube screw shaft fitted with a continuous liner ✓
as fitted as fitted

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
as fitted as fitted

boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

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 ✓

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
If so, state type Length of Bearing in Stern Bush next to and supporting propeller ✓

ler, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

d of reversing Engines ENGINE NON-REVERSIBLE Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of lubrication
PRIESTMAN REVERSE GEAR.

Thickness of cylinder liners .094" Are the cylinders fitted with safety valves NO Are the exhaust pipes and silencers water cooled or lagged with
insulating material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓

g Water Pumps, No. 1 CENTRIFUGAL Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work ✓

connected to the Main Bilge Line } No. and Size ✓
How driven ✓

roling 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
vents

Pumps, No. and size Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Machinery Spaces In Pump Room

, &c.

ident Power Pump Direct Suctions to the Engine Room Bilges, No. and size

the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions in the Machinery Spaces
easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

ea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks ✓

ized 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 ✓

ach 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 ✓

as pass through the bunkers How are they protected ✓

as pass through the deep tanks Have they been tested as per Rule ✓

ipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ✓

ngement 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
ent to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from ✓

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

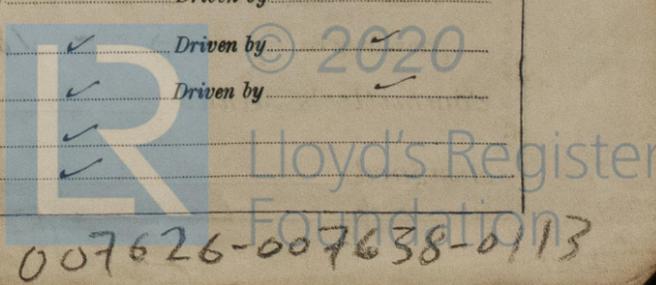
Compressors, No. No. of stages Diameters Stroke Driven by ✓

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

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

ng Air Pumps, No. Diameter Stroke Driven by ✓

Engines crank shafts, diameter as per Rule No. Position
as fitted



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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 Is a drain fitted at the lowest part of each receiver

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

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

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

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

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 22/12/36 & 1/1/37 Receivers Separate Fuel Tanks
(If not, state date of approval) PLAN ATTACHED

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 No spare gear at present ordered from W. H. Dorman & Co. Ltd.

State the principal additional spare gear supplied

The foregoing is a correct description,

W. H. Dorman & Co. Limited
A. Smallwood

Manufacturer.

Dates of Survey while building
During progress of work in shops-- 21.1.37, 5/2/37 & 10/2/37
During erection on board vessel--
Total No. of visits 3

Dates of Examination of principal parts—Cylinders 21.1.37 Covers 21.1.37 Pistons 21.1.37 Rods Connecting rods 21.1.37

Crank shaft 26.1.37 Flywheel shaft 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

Crank shaft, Material S. 76 STEEL Identification Mark Flywheel shaft, Material [CRANKSHAFT] Identification Mark

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.

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

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. This engine has been built under special survey in accordance with the Secretary's letter dated 22/12/37 and approved plan, the materials and workmanship are sound. After completion the engine was examined under a full load shop test, temperatures were noted and all found satisfactory. On satisfactory installation of the engine in the Grab Hopper Barge the vessel will be eligible to have record of L. M. C. with date.)

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

The amount of Entry Fee .. £	12-0-0	When applied for,	26.2.1937
Special	£ 15 : 0 -		
1/6 Hull	£ 3-0-0		
Donkey Boiler Fee ... £	- : -	When received,	5.3.1937
Travelling Expenses (if any) £	- : 18 -		

H. M. Currier G. Y. Champness
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute TUE 13 JUL 1937

Assigned See Yms 20155

