

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office.

Date of writing Report 1943 When handed in at Local Office 6.12.43 Port of GLASGOW

No. in Survey held at Penfrew Date, First Survey 8.9.42 Last Survey 24.11.43

Reg. Book (Number of Visits 90)

on the T.W. Sc. Salvage Vessel "SALVAGE DUKE"

Built at Penfrew By whom built Wm. Simons & Co. Ltd. Yard No. J1526/763 When built 1943

Engines made at Penfrew By whom made -do- Engine No. 764 When made 1943

Boilers made at -do- By whom made -do- Boiler No. 763 When made 1943

Registered Horse Power Owners The Admiralty Port belonging to Glasgow

Nom. Horse Power as per Rule 254 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Salvage vessel

GINES, &c.—Description of Engines T.W. Sc. Triple Expansion Revs. per minute 140

No. of Cylinders 14-23-38 1/2 Length of Stroke 24 No. of Cranks 6

Crank shaft, dia. of journals as per Rule 7.37 as fitted 4 1/2 Crank pin dia. 7 1/2 Mid. length breadth 11 7/8 Thickness parallel to axis 5 1/4

Crank webs as fitted 5 1/4 Mid. length thickness 5 1/4 Thickness around eye-hole 3 1/4

Intermediate Shafts, diameter as per Rule 7.02 as fitted 4 1/8 Thrust shaft, diameter at collars as per Rule 7.37 as fitted 7 1/2

Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 8.1 as fitted 8 1/4 Is the shaft fitted with a continuous liner No (2 liners)

Bronze Liners, thickness in way of bushes as per Rule 1/2 as fitted 9/16 Thickness between bushes as fitted Is the after end of the liner made watertight in the propeller boss Yes 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

at No If so, state type Length of Bearing in Stern Bush next to and supporting propeller 3'-3 3/8

Propeller, dia. 9'-0" Pitch 10'-0" No. of Blades 3 Material C.S. whether Moveable No Total Developed Surface 22.5 sq. feet

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

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

Feed Pumps No. and size 2 @ 8 1/2" x 6" x 18" How driven Steam Pumps connected to the Main Bilge Line No. and size 1-4" x 6" x 15" How driven Steam Pump 7" x 6 1/2" x 15"

Ballast Pumps, No. and size 1 @ 27 1/2" x 37 1/2" x 18" Lubricating Oil Pumps, including Spare Pump, No. and size

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

Bilge Pumps:—In Engine and Boiler Room 2 @ 23" x 4" x 18" Off 2 @ 22" x 4" x 18" Tunnel 2 @ 23" x 4" x 18" Tunnel well 1 @ 3"

Boiler Room 2 @ 23" x 4" x 18" Off 2 @ 22" x 4" x 18" Tunnel 2 @ 23" x 4" x 18" Tunnel well 1 @ 3"

Tunnel well 1 @ 5"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 2 @ 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 4" B.R.I.C. 2 1/2" x 6" x 18"

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes as approved

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line Both

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 Yes

What Pipes pass through the bunkers none 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 Yes

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 Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from T.W. sk. space

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 4046 sq. ft.

Which Boilers are fitted with Forced Draft Yes Which Boilers are fitted with Superheaters none

No. and Description of Boilers 2 Single-ended Working Pressure 200 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded?

Can the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting 10/4/41: 27/4/41 Main Boilers 8/2/41 Auxiliary Boilers Donkey Boilers

(If not state date of approval)

Superheaters General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements 28/4/42

## SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

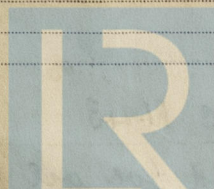
State the principal additional spare gear supplied As per specification.

The foregoing is a correct description.

FOR WM. SIMONS &amp; CO. LTD.

Manufacturer.

SECRETARY



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During progress of work in shops -- 1942 Sep 8 Oct 9 Nov 17 20 30 Dec 7 21 1943 Jan 6 Feb 9 Mar 2 11 15 17 18 22 24 25 30 31 Apr 5 7 21 23 May 3 7 11 13 17 18 20 21 24 25 26 27 28 Jun 2 7 8 9 11 14 17 18 21 24 28 29 July 10 12 15 16 19 22 24 25 26 27 28 29 Aug 2 16 17 19 20 21 24 Sep 2 3 6 14 15 16 17 22 30 Oct 1 12 15 18 25 26 27 Nov 3 5 10 15 16 23

Dates of Survey while building During erection on board vessel -- 24

Total No. of visits 90

Dates of Examination of principal parts—Cylinders 2-3-43 Slides 2-3-43 Covers 2-3-43

Pistons 30-9-43 Piston Rods 30-9-43 Connecting rods 30-9-43

Crank shaft 24-5-43 Thrust shaft 30-9-43 Intermediate shafts 30-9-43

Tube shaft -- Screw shaft 26-10-43 & 12-10-43 Propeller 26-10-43

Stern tube 24-3-43 Engine and boiler seatings 15-10-43 Engines holding down bolts 5-11-43

Completion of fitting sea connections 27-10-43

Completion of pumping arrangements 24-11-43 Boilers fixed 5-11-43 Engines tried under steam 24-11-43

Main boiler safety valves adjusted 15-11-43 Thickness of adjusting washers F 1 1/32 P 3/8 A 3/8 P 1/5

Crank shaft material SM. steel Identification Mark 1188894 Thrust shaft material SM. steel Identification Mark 953+960A JB

Intermediate shafts, material SM. steel Identification Marks 949-957A JB Tube shaft, material -- Identification Mark --

Screw shaft, material SM. steel Identification Mark 962+972 Steam Pipes, material steel Test pressure 600 lb Date of Test Sept. & Oct. /43

Is an installation fitted for burning oil fuel Yes TRG Is the flash point of the oil to be used over 150° F. Yes

Have the requirements of the Rules for the use of oil as fuel been complied with Yes

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 --

Is this machinery duplicate of a previous case Yes If so, state name of vessel "OCEAN SALVOR" J.G. Port. N° 67630

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under special survey in accordance with the Rules and approved plans; also in accordance with Admiralty specification, and the materials and workmanship are good. It has been satisfactorily installed in the vessel, tested under full load and found efficient and, in our opinion, is eligible to be classed with record + LMC 11, 43 and notation:— Fitted for Oil Fuel: FP above 150°F 11, 43.

N.B. The electrical equipment has been installed under the supervision of Admiralty Officers.

The amount of Entry Fee ... £ : : When applied for, 7 DEC 1943

Special ... £ 63 : - : When received, 19

Donkey Boiler Fee ... £ : : 63

Travelling Expenses (if any) £ : : 19

ADMIRALTY

A/c rendered from London 15.12.43

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 7 DEC 1943

Assigned -1- Rmc 11.43

Fitted for oil fuel 11.43 I.P. above 150°F