

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 6 JAN 1932

Date of writing Report 19 When handed in at Local Office 4 1 10 32 Port of GLASGOW.

No. in Survey held at Troon Date, First Survey 14 5 31 Last Survey 2 - 1 - 1932
Reg. Book. on the SS. "THE SULTAN" (Number of Volls 32)

built at Troon By whom built Ailsa S.B. Co Ltd. Yard No. 418 Tons { Gross 824
Net 405
When built 1932.

Engines made at Troon By whom made Ailsa S.B. Co Ltd. Engine No. 153. When made 1932

Boilers made at Glasgow By whom made D Rowan & Co Ltd. Boiler No. 385. When made 1931.

Registered Horse Power Owners J. Hay & Sons Ltd. Port belonging to Glasgow.

m. Horse Power as per Rule 115. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

made for which Vessel is intended Casting

GINES, &c.—Description of Engines Triple Expansion Revs. per minute 94.

No. of Cylinders 14, 23 1/2 x 39" Length of Stroke 30" No. of Cylinders 3. No. of Cranks 3.

Rank shaft, dia. of Journals as per Rule 4.96 Crank pin dia. 8 1/8" Crank webs Mid. length breadth 15 1/2" Thickness parallel to axis 5" ✓
as fitted 8 1/8" Mid. length thickness 5" shrunk Thickness around eye-hole 3 9/16"

Intermediate Shafts, diameter as per Rule 4.56 as fitted None Thrust shaft, diameter at collars as per Rule 4.96 as fitted 8 1/8" Michell ✓

the Shafts, diameter as per Rule 8.54 as fitted 8 3/4" Is the { tube } shaft fitted with a continuous liner { Yes. ✓
as fitted 8 3/4" { screw }

ronze Liners, thickness in way of bushes as per Rule 5.56 as fitted 5/8" Thickness between bushes as per Rule 4.14 as fitted 5/8" Is the after end of the liner made watertight in the
apeller 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-corrosive Close fit

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

aft No. If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 2' - 11"

propeller, dia. 11' - 6" Pitch 12' - 0" No. of Blades 4 Material C. Iron whether Movable No. Total Developed Surface 45.4 sq. feet

ed Pumps worked from the Main Engines, No. 2 Diameter 2 1/8" Stroke 15" Can one be overhauled while the other is at work Yes.

ilge Pumps worked from the Main Engines, No. 2 Diameter 2 5/8" Stroke 15" Can one be overhauled while the other is at work Yes.

eed { No. and size 1 Duplex 6" x 4 1/4" x 6" Pumps connected to the { No. and size 1 Duplex 4" x 8" x 8"
amps { How driven Steam Main Bilge Line { How driven Steam

allast Pumps, No. and size 1 @ 4" x 8" x 8" Lubricating Oil Pumps, including Spare Pump, No. and size —

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

ilge Pumps;—In Engine and Boiler Room 3 @ 2 1/4" In Holds, &c. 2 @ 3"

Pump Room

ain Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 4" Independent Power Pump Direct Suctions to the Engine Room Bilges,
o. and size 1 @ 3" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes

re 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

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

re 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 Above

re 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

That Pipes pass through the bunkers Hold bilge suction How are they protected Wood protected

That pipes pass through the deep tanks Have they been tested as per Rule Yes

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

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
mpartment to another Yes Is the Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

AIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 2021 sq. ft.

Forced Draft fitted No. No. and Description of Boilers One S.B. Working Pressure 200 lbs.

S A REPORT ON MAIN BOILERS NOW FORWARDED? Yes. (Gk 51816)

S A DONKEY BOILER FITTED? No. If so, is a report now forwarded? —

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Yes Auxiliary Boilers ✓ Donkey Boilers ✓
(If not state date of approval)

uperheaters. ✓ General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR.

as the spare gear required by the Rules been supplied Yes.

ate the principal additional spare gear supplied Two Connecting rod top end bolts & nuts. Two bottom end bolts and
nuts Two main bearing bolts one set of coupling bolts one set of feed & bilge pump valves.
a quantity of assorted bolts & nuts & iron of various sizes.

The foregoing is a correct description,
FOR AILSA SHIPBUILDING CO., LIMITED

J. M. Mungton
ENGINEER-MANAGER

Manufacturer.



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Lloyd's Register
Foundation

W1142-0028

1931 May: 14, 19, 26 June: 2, 15, 18, 23, 30 July: 6, 15 Aug: 5, 6, 11, 17, 19, 26, 28 Sep: 7, 11, 15
 During progress of work in shops --- 29 Oct: 13 Nov: 18 Dec: 2, 10, 16, 18, 25, 29 (1932) Jan: 2
 Dates of Survey while building ---
 During erection on board vessel ---
 Total No. of visits **32**

Dates of Examination of principal parts—Cylinders 14-8-31 Slides 19-8-31 Covers 14-8-31
 Pistons 19-8-31 Piston Rods 5-8-31 Connecting rods 5-8-31
 Crank shaft 5-8-31 Thrust shaft 15-6-31 Intermediate shafts ---
 Tube shaft --- Screw shaft 11-9-31 Propeller 4-9-31
 Stern tube 4-9-31 Engine and boiler seatings 29-9-31 Engines holding down bolts 18-12-31
 Completion of fitting sea connections 16-9-31
 Completion of pumping arrangements 25-12-31 Boilers fixed 16-12-31 Engines tried under steam 29-12-31
 Main boiler safety valves adjusted 25-12-31 Thickness of adjusting washers PORT Valve $\frac{5}{16}$ " STAR Valve $\frac{11}{32}$ "
 Crank shaft material S Identification Mark LLOYDS N° 8951 Thrust shaft material S Identification Mark LLOYDS N° 8953
 Intermediate shafts, material --- Identification Marks DCB 5-8-31 Tube shaft, material --- Identification Mark DCB 15-6-31
 Screw shaft, material S Identification Mark LLOYDS N° 4419 PCB 11-9-31 Steam Pipes, material Copper Test pressure 400 lbs Date of Test 18-11-31
 Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150°F.

Have the requirements of the Rules for the use of oil as fuel 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 Yes If so, state name of vessel "The Emperor" C.L.S. REPORT 5017

General Remarks (State quality of workmanship, opinions as to class, &c. *The Machinery has been built under Special Survey in accordance with the Rules of the Society.*
The Workmanship and Materials are of good quality.
The Engines and Boiler have been recently fitted on board and tried under working conditions with satisfactory results.
It is submitted that this vessel is eligible for Record of L.M.C. 1-32 in the Register.

GLASGOW

The amount of Entry Fee ... £ 3 : - :
 Special ... £ 17 : 5 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ 3 : 5 :
 When applied for, 5-JAN-1932
 When received, 8-1-1932

David C Barr, J. J. Barr.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 5-JAN-1932

Assigned + LMC 1.32

CERTIFICATE WRITTEN