

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 2 MAY 1928

of writing Report 19 When handed in at Local Office 28.4.28 19 Port of *Glasgow*
 in Survey held at *Glasgow* Date, First Survey 16.9.27 Last Survey 20.4.1928
 Book on the *SCREW STEAMER "MIRANI"* (Number of Visits *44*)
 Tons { Gross 739
 Net 381
 at *Glasgow*. By whom built *Glasgow Dockyard Co. Ltd.* Yard No. 415 When built 1925.4
 Lines made at *Glasgow* By whom made *M. Kie & Baxter Ltd.* Engine No. 1209 when made 1928
 Makers made at *Glasgow* By whom made *Palmer S. D. & I. C. Ltd.* Boiler No. 1087 when made 1928.
 Registered Horse Power - Owners *Burns, Philp & Co. Ltd.* Port belonging to *London*
 Net Horse Power as per Rule 100 Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*
 Trade for which Vessel is intended *Australian*

GINES, &c.—Description of Engines *Triple Expansion* Revs. per minute 125
 No. of Cylinders 12 1/2 - 21 - 34 Length of Stroke 24 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 6.819 Crank pin dia. 7 Crank webs Mid. length breadth 13 1/4 Thickness parallel to axis 4 7/16
 as fitted 7 Mid. length thickness 4 7/16 shrunk Thickness around eye-hole 3 1/8
 Intermediate Shafts, diameter as per Rule 6.495 Thrust shaft, diameter at collars as per Rule 6.819
 as fitted 6 9/8
 Main Shafts, diameter as per Rule *None* Screw Shaft, diameter as per Rule 7.225 Is the *hub* shaft fitted with a continuous liner *Yes*
 as fitted *None* as fitted 7 7/8 *screw*
 Bronze Liners, thickness in way of bushes as per Rule .575 as per Rule .375 Is the after end of the liner made watertight in the
 as fitted 9/16 Thickness between bushes as fitted 13/32
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *In joints*
 Is 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 *Yes*
 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 *No* Length of Bearing in Stern Bush next to and supporting propeller 30 1/2
 Propeller, dia. 8'-9" Pitch 9'-6" No. of Blades 4 Material *Bronze* whether Moveable *No* Total Developed Surface 28.5 sq. feet
 Main Pumps worked from the Main Engines, No. 2 Diameter 2 1/4 Stroke 12 Can one be overhauled while the other is at work *Yes*
 Auxiliary Pumps worked from the Main Engines, No. 2 Diameter 2 1/4 Stroke 12 Can one be overhauled while the other is at work *Yes*
 Bilge Pumps { No. and size 1. Main 6 1/2 x 4 x 1/2 Pumps connected to the { No. and size 1. 6 x 6 x 6 Dup, 1. 5 x 3 1/2 x 6 Dup.
 How driven *Steam* Main Bilge Line How driven *Steam*
 Main Pumps, No. and size 1. 6 x 6 x 6 Dup. Lubricating Oil Pumps, including Spare Pump, No. and size *None*
 Are there two independent means arranged for circulating water through the Oil Cooler *—* Suctions, connected to both Main Bilge Pumps and Auxiliary
 Pumps;—In Engine and Boiler Room *Eng. Room 3-2 1/2" Blk. Room 2-2 1/2" Tunnel Well 1-2 1/2" Bone*
 Holds, &c. *Fore Hold 2-2 1/2" aft Hold 3-2 1/2" Bone*

Sea Water Circulating Pump Direct Bilge Suctions, No. and size 1-4 Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1-2 3/4 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes *Yes*
 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 *Yes*
 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 *D.W.L.*
 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*
 How are they protected *Covering*
 How are they protected *Covering*
 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 *Top Platform E.R.*

MAIN BOILERS, &c.—(Letter for record *S.*) Total Heating Surface of Boilers *1995 sq. ft.*
 Forced Draft fitted *No* No. and Description of Boilers *One Cyl. Single End* Working Pressure 200 lb. sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes*
 IS A DONKEY BOILER FITTED? *Yes* If so, is a report now forwarded? *Yes*
 PLANS. Are approved plans forwarded herewith for Shafting 24.8.27 Main Boilers *Yes* Auxiliary Boilers *—* Donkey Boilers *Yes*
 (If not state date of approval) *4th*
 Preheaters *—* General Pumping Arrangements *Yes* Oil fuel Burning Piping Arrangements *—*

SHAFTING GEAR. State the articles supplied:— 2 Top and bottom teeth & nuts, 2 bottom end teeth, 2 main
 bearing teeth, set of coupling teeth & nuts, 1 set each, feed & bilge pump rollers,
 1 main & 1 donkey feed shaft rollers, 6 camshaft rollers, 6 bottom rollers, 1 propeller
 shaft, 1 propeller, 1 crank shaft, uncut teeth & nuts, iron of various sizes.

The foregoing is a correct description.

M. Kie & Baxter Ltd.
J. Rosewarne

Manufacturer.



1927 Sep 16 Oct. 13-24-26 Nov. 1-3-8-11-16-22-28 Dec 1-6-13-21-27-30 (1928) Jan 13-18-24-27-31 Feb 8-9-13
 Mar 1-2-6-7-8-13-16-19-23-26-28-30 Apr 3-10-11-19-20

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel --
 Total No. of visits *44*

Dates of Examination of principal parts—Cylinders *13-1-28* Slides *24-1-28* Covers *13-1-28*
 Pistons *24-1-28* Piston Rods *27-1-28* Connecting rods *27-4-28*
 Crank shaft *21-12-27* Thrust shaft *21-12-27* Intermediate shafts *21-12-27*
 Tube shaft *None* Screw shaft *28-11-27* Propeller *1-12-27*
 Stern tube *13-2-28* Engine and boiler seatings *9-2-28* Engines' holding down bolts *28-3-28*
 Completion of fitting sea connections *6-3-28*
 Completion of pumping arrangements *3-4-28* Boilers fixed *28-3-28* Engines tried under steam *19-4-28*
 Main boiler safety valves adjusted *30-3-28* Thickness of adjusting washers *P.V. 9/32 5V 9/32*
 Crank shaft material *S.M.S.* Identification Mark *1209 W.L.* Thrust shaft material *S.M.S.* Identification Mark *2152-6 A.F.*
 Intermediate shafts, material *S.M.S.* Identification Marks *2151-607 A.F.* Tube shaft, material *None* Identification Mark *—*
 Screw shaft, material *S.M.S.* Identification Mark *2131-606 A.F.* Steam Pipes, material *Copper* Test pressure *400 lb* Date of Test *19-4-28*
 Is an installation fitted for burning oil fuel *No* 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 *No* 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 *"MALAKE"*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been constructed under Special Survey in accordance with the Society's Rules, together with the main and donkey boilers, it has been fitted on board the vessel in a satisfactory manner and found satisfactory under working conditions. The vessel is eligible, in our opinion, to have record + L.M.C. 4-28*

It is submitted that this vessel is eligible for THE RECORD. *+ L.M.C. 4-28 et.*

W.L.
3/5/28

A.G.
28/4/28

Glasgow

Certificate 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 ... | £ 3 : 0 | When applied for, | <i>30/4/28</i> |
| <i>3/5</i> Special ... | £ 15 : 0 | When received, | <i>25-5-28</i> |
| Donkey Boiler Fee ... | £ — | | |
| Travelling Expenses (if any) £ | <i>1-9-0</i> | | |

W. Lane, H.L. Sutherland.
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 1-MAY 1928**

Assigned *+ L.M.C. 4-28.*

CERTIFICATE WRITTEN.



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