

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 10 SEP 1941

Date of writing Report 19 When handed in at Local Office 8. 9. 1941 Port of Glasgow

No. in Survey held at Reg. Book. 91051. on the SS "Empire Drallow" Date, First Survey 24. 7. 1940 Last Survey 28. 8. 1941 (Number of Visits 55) Gross 6327 Tons Net 4592

Built at Glasgow By whom built C. Beumell & Co. Ltd. Yard No. 434 When built

Engines made at do. By whom made D. Rowan & Co. Engine No. 1072 When made 1941

Boilers made at do. By whom made do. Boiler No. 1072 When made 1941

Registered Horse Power Owners Ministry of War Transport Port belonging to

Nom. Horse Power as per Rule 439 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended

ENGINES, &c.—Description of Engines Simple Expansion

Dia. of Cylinders 23 1/2 : 34 1/2 : 68 1/4 Length of Stroke 48 No. of Cylinders 3 Revs. per minute 3

Crank shaft, dia. of journals as per Rule 13 1/2 as fitted 13 1/2 Crank pin dia. 13 3/4 Mid. length breadth 26 3/4 Thickness parallel to axis 8 1/2

Intermediate Shafts, diameter as per Rule 12 9/16 as fitted 12 9/16 Crank webs Mid. length thickness 8 3/4 Thickness around eye-hole 6 1/2

Tube Shafts, diameter as per Rule 13 1/2 as fitted 13 1/2 Thrust shaft, diameter at collars as per Rule 13 1/2 as fitted 13 1/2

Screw Shaft, diameter as per Rule 14 1/2 as fitted 14 1/2 Is the shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 1/4 as fitted 1/4 Thickness between bushes as per Rule 1/2 as fitted 1/2 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 Yes

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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No If so, state type

Propeller, dia. 17 1/4 Pitch 17 1/2 No. of Blades 4 Material 6E whether Moveable No Length of Bearing in Stern Bush next to and supporting propeller 4 1/2 Total Developed Surface 107 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 4 Stroke 24 Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 Stroke 24 Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size 2 2 1/2 x 7 x 11 How driven Steam Pumps connected to the Main Bilge Line { No. and size 1 2 1/2 x 5 x 8 How driven Steam

Ballast Pumps, No. and size 1 2 1/2 x 12 x 12 Lubricating Oil Pumps, including Spare Pump, No. and size 1 2 1/2 x 12 x 12

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 2 2 1/2 in ER. 2 2 1/2 in BR

In Pump Room 2 2 1/2 in ER. 2 2 1/2 in BR In Holds, &c. 2 2 1/2 in ER. 2 2 1/2 in BR

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 2 1/2 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 2 1/2

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 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 Below

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

That Pipes pass through the bunkers Yes How are they protected Yes

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

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 No worked from Yes

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 5920 ft<sup>2</sup>

Which Boilers are fitted with Forced Draft Yes Which Boilers are fitted with Superheaters Yes

and Description of Boilers 2 2 1/2 Working Pressure 220 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

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

Can the donkey boiler be used for domestic purposes only Yes

PLANS. Are approved plans forwarded herewith for Shafting 14-3-41 Main Boilers 8-12-39 Auxiliary Boilers Yes Donkey Boilers Yes

(If not state date of approval)

Superheaters Yes General Pumping Arrangements 14-10-40 Oil fuel Burning Piping Arrangements Yes

## SPARE GEAR.

Is the spare gear required by the Rules been supplied Yes

Is the principal additional spare gear supplied See list attached.

The foregoing is a correct description.

For David Rowan & Co. Ltd.  
Arch. W. Grierson

Manufacturer.



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Lloyd's Register  
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02923-002928-0165



4: 64315

1940 July: 2, 4, 26 Aug: 12 Sep: 9 Oct: 3, 31 Nov: 1, 15, 25, 29 Dec: 11, 12, 24, 27, 30 (1941) Jan: 9, 13, 27  
Feb: 11, 14, 21 Mar: 4, 24 Apr: 3, 11, 16, 17, 23, 24 May: 7, 8, 14, 16, 19, 21, 22, 27, 29 June: 2, 3, 13, 18, 19  
During progress of work in shops - -  
Dates of Survey while building  
During erection on board vessel - - -  
Total No. of visits 55

Dates of Examination of principal parts—Cylinders 11.4.41 Slides 22.5.41 Covers 22.5.41  
Pistons 2.6.41 Piston Rods 2.6.41 Connecting rods 22.5.41  
Crank shaft 14.5.41 Thrust shaft 24.5.41 Intermediate shafts 5.4.41  
Tube shaft Screw shaft 16.5.41 Propeller 16.5.41  
Stern tube 8.5.41 Engine and boiler seatings 24.6.41 Engines holding down bolts 8.8.41  
Completion of fitting sea connections 2.7.41  
Completion of pumping arrangements 28.8.41 Boilers fixed 16.8.41 Engines tried under steam 28.8.41  
Main boiler safety valves adjusted 15.8.41 Thickness of adjusting washers *Photo P 16 5 1/2. Stud hole P 15 7/8*  
Crank shaft material *Identified* Identification Mark *9569 14.5.41* Thrust shaft material *Identified* Identification Mark *ATB*  
Intermediate shafts, material *do* Identification Marks *9903-ATB* Tube shaft, material Identification Mark  
Screw shaft, material *do* Identification Mark *ATB* Steam Pipes, material *Identified* Test pressure *660* Date of Test *18.7.41*  
Is an installation fitted for burning oil fuel *do* 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 *"Empire Glen" Gls Report No. 64061.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good  
The machinery has been constructed under special survey, satisfactorily fitted in the vessel  
tried under steam and found good. It is eligible in my opinion for classification  
and the record + LMC 8, 41

The requirements of the Ministry of Shipping specification have been complied with

The amount of Entry Fee ... £ 5 : : When applied for,  
Special ... £ 90 : 17 : : 9 SEP 1941  
Donkey Boiler Fee *spec fee* ... £ 22 : 14 : : When received,  
Travelling Expenses (if any) £ : : : 19

Committee's Minute GLASGOW 9 SEP 1941

Assigned -1- LMC 8, 41  
2.0

*M. J. Brown*  
Engineer Surveyor to Lloyd's Register of Shipping.



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