

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

10 APR 1929

Date of writing Report April 4<sup>th</sup> 1929 When handed in at Local Office April 5<sup>th</sup> 1929 Port of GLASGOW.

No. in Survey held at Yroon. Date, First Survey 11.10.28 Last Survey Mar 29<sup>th</sup> 1929.  
 Reg. Book. on the SS LEEUWARDEN. (Number of Visits 27) Gross Tons 1209  
 Net Tons 538

Built at Yroon By whom built Ailsa S.B. Co Ltd. Yard No. 409 When built 1929

Engines made at Yroon By whom made Ailsa S.B. Co Ltd Engine No. 144 when made 1929.

Boilers made at Glasgow. By whom made David Rowan & Co Ltd Boiler No. 364 when made 1929.

Registered Horse Power Owners General Steam Nav. Co. Ltd. Port belonging to London.

Nom. Horse Power as per Rule 304. Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes.

Trade for which Vessel is intended

**ENGINES, &c.**—Description of Engines Triple Expansion. Revs. per minute 100.

Dia. of Cylinders 21" 34" 56" Length of Stroke 36" No. of Cylinders 3 No. of Cranks 3.

Crank shaft, dia. of journals as per Rule 11.01" Crank pin dia. 11 3/8" Mid. length breadth 11.9" Thickness parallel to axis 4"  
 as fitted 11 1/8" Crank webs 4" shrunk Mid. length thickness 4" Thickness around eye-hole 4 1/16"

Intermediate Shafts, diameter as per Rule 10.49" Thrust shaft, diameter at collars as per Rule 11.01"  
 as fitted 10 1/2" as fitted 11 1/8"

Tube Shafts, diameter as per Rule 11.54" Is the tube shaft fitted with a continuous liner Yes.  
 as fitted 11 1/8" as fitted 11 1/8"

Bronze Liners, thickness in way of bushes as per Rule .65" Thickness between bushes as per Rule .484" Is the after end of the liner made watertight in the propeller boss Yes  
 as fitted 3/4" as fitted 9/16"

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 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 3'-11 1/2"

Propeller, dia. 13'-3" Pitch 14'-9" No. of Blades 4 Material Bronze whether Moveable No Total Developed Surface 58 f sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 18" Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 18" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size 2 @ 6" x 8 1/2" x 18" + 1 @ 3" x 4 1/2" x 6" Pumps connected to the { No. and size 1 @ 4" x 4" x 8" and 1 @ 6" x 6" x 6"  
 How driven Steam Main Bilge Line How driven Steam

Ballast Pumps, No. and size 1 @ 4" x 4" x 8" 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 3 @ 2 1/2"

In Holds, &c. Nº 1 Hold 2 @ 2 1/2" Nº 2 Hold 2 @ 2 1/2" Nº 3 Hold 2 @ 2 1/2" Tunnel Well 1 @ 2 1/2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 3 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

What Pipes pass through the bunkers For Bilge Pipes How are they protected Wood Covering.

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

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 Upper Deck.

**MAIN BOILERS, &c.**—(Letter for record —) Total Heating Surface of Boilers 5834 f.

Is Forced Draft fitted No No. and Description of Boilers 2 S.E. Marine Working Pressure 200 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? —

IS 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)

Superheaters — General Pumping Arrangements — Oil fuel Burning Piping Arrangements —

**SPARE GEAR.** State the articles supplied:— Two Connecting rod top end bolts and nuts, Two bottom end bolts and nuts, Two main bearing bolts, One set of coupling bolts One set of feed and bilge pump valves, A quantity of assorted bolts and nuts and Iron of various sizes

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

J McNaughton Manufacturer.  
 ENGINEER MANAGER



740P41

Dates of Survey while building  
During progress of work in shops -- 1928 Oct 11-25 Nov 1-5-16-26 Dec 11-14-18-20 (1929) Jan 8-14-17-22-24-29-31 Feb 14-28  
During erection on board vessel -- Mar 4-8-12-13-21-22-26-29

Total No. of visits 27  
Dates of Examination of principal parts—Cylinders 16-11-28 Slides 26-11-28 Covers 26-11-28  
Pistons 14-12-28 Piston Rods 22-1-29 Connecting rods 22-1-29  
Crank shaft 18-12-28 Thrust shaft 20-12-28 Intermediate shafts 20-12-28  
Tube shaft — Screw shaft 31-1-29 Propeller 31-1-29  
Stern tube 22-1-29 Engine and boiler seatings 14-1-29 Engines holding down bolts 28-2-29  
Completion of fitting sea connections 14-1-29  
Completion of pumping arrangements 21-3-29 Boilers fixed 19-2-28 Engines tried under steam 29-3-29  
Main boiler safety valves adjusted 21-3-29 Thickness of adjusting washers PBFV 17/32 PBAV 9/16 SBFV 9/16 SBAV 19/32

Crank shaft material S Identification Mark LLOYDS NO 144  
Intermediate shafts, material S Identification Mark LLOYDS NO 66  
Screw shaft, material Identification Mark LLOYDS NO 65  
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 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 Ys Groninger

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines have been constructed under Special Survey in accordance with the Rules of the Society. The workmanship and materials are of good quality. The engines and boilers have been securely fitted on board and tried under steam with satisfactory results. It is submitted that this vessel is eligible for a record of LMC 3-29.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3.29. C.L

6/4/29

Rm DA  
11.4.29

Certificate to be sent to

The amount of Entry Fee ... £ 5 : 0 :  
3/5 of Special ... £ 42 : 4 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 4 : 5 :  
When applied for, 9 APR 1929  
When received, 12.4.29

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

Committee's Minute GLASGOW 9 - APR 1929  
Assigned + L.M.C. 3,29

CERTIFICATE WRITTEN.

