

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

APR 19 1938

Date of writing Report

19

When handed in at Local Office

16 APR 1938

Port of

SUNDERLAND.

No. in Survey held at  
Reg. Book.

SUNDERLAND.

Date, First Survey

7 June 37

Last Survey

Oct 8 1938

(Number of Visits 87)

on the

S.S. AELYBRYN

Tons

Gross 4986

Net 2947

Built at

Sunderland

By whom built

Sir J. Laing &amp; Sons Ltd

Yard No.

719

When built

1938

Engines made at

Sunderland

By whom made

H.E. Mannie Eng. Co.

Engine No.

2886

When made

1938

Boilers made at

Sunderland

By whom made

H.E. Mannie Eng. Co.

Boiler No.

2886

When made

1938

Registered Horse Power

Owners

Minster S.S. Co. Ltd

Port belonging to

London

Nom. Horse Power as per Rule

353

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which Vessel is intended

**ENGINES, &c.**—Description of Engines *Triple Expansion; Poppet Valves H.P.* Revs. per minute

Dia. of Cylinders *2 1/2", 37" 62"* Length of Stroke *42"* No. of Cylinders *3* No. of Cranks *3*

Crank shaft, dia. of journals *as per Rule appld.* Crank pin dia. *12 5/8"* Crank webs *Mid. length breadth — shrunk* Thickness parallel to axis *7 3/4", 8 1/2", 6 1/2"*

Intermediate Shafts, diameter *as per Rule appld.* Thrust shaft, diameter at collars *as per Rule appld.* Thickness around eye-hole *7 1/2", 6 1/2"*

Tube Shafts, diameter *as per Rule —* Screw Shaft, diameter *as per Rule appld.* Is the tube shaft fitted with a continuous liner *Yes*

Bronze Liners, thickness in way of bushes *as per Rule appld.* Thickness between bushes *as fitted 3/4"* 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 shaft *Yes*

If so, state type *—* Length of Bearing in Stern Bush next to and supporting propeller *4' 9"*

Propeller, dia. *17' 6"* Pitch *18.57'* No. of Blades *4* Material *Eng. Br.* whether Movable *fixed* Total Developed Surface *99.5* 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. *2* Diameter *3 1/2"* Stroke *1' 10 1/2"* Can one be overhauled while the other is at work *Yes*

Feed Pumps { No. and size *2, 6 1/2" x 18"* Pumps connected to the { No. and size *1, 9" x 11" x 10"*

How driven *Steam* Main Bilge Line How driven *Steam*

Ballast Pumps, No. and size *1, 9" x 11" x 10"* 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 *Eng. Rm. one 3" dia. port + starboard. Btl. Rm. one 3" dia. port + starboard.*

In Pump Room *—* In Holds, &c. *Main hold 3 1/2" dia. port + starboard, fore hold 3" dia. port + starboard, main hold A 2 1/2" dia. port + starboard.*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *1, 7" dia.* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1, 5" dia.*

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 ship 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 *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 upper Deck level in Eng. Rm.

**MAIN BOILERS, &c.**—(Letter for record *S*) Total Heating Surface of Boilers *5087* *4*

Is Forced Draft fitted to main *Boilers* No. and Description of Boilers *3 Multitubular Cylindrical* Working Pressure *220 lbs.*

IS A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes* (*2 Spk*)

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

Is the donkey boiler intended to be used for domestic purposes only *—*

**PLANS.** Are approved plans forwarded herewith for Shafting *15/12/36* Main Boilers *Yes* Auxiliary Boilers *Yes* Donkey Boilers *—*

(If not state date of approval)

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

## SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*

State the principal additional spare gear supplied

*one propeller shaft complete*

*one oil piston rings & h.p. piston*

*Piston and valves spindle for circulating pump*

*Top & bottom end bearings*

*3 main check valve lids*

*4 1/2" check valve lids*

*1 main A.V. Spring*

*1 1/2" A.V. Spring*

The foregoing is a correct description,  
FOR THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

A. J. Berry

Manufacturer.

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Lloyd's Register  
Foundation

W142-0122



Dates  
of Survey  
while  
building

During progress of  
work in shops --

During erection on  
board vessel --

Total No. of visits

1937 June 7, 28, 29 July 8, 19, 23 Aug 6, 10, 12, 13, 18, 19, 26, 27 Sep 1, 15, 17, 29 Nov 8, 11, 12, 18, 19, 23, 24, 26, 29 Dec 3, 8, 10, 14, 16, 20, 21, 24, 28, 29, 30 1938 Jan 5, 7, 11, 12, 13, 14, 17, 18, 20, 21, 24, 27, 31 Feb 1, 2, 4, 7, 9, 10, 14, 15, 16, 17, 21, 22, 23, 25, 28 Mar 1, 2, 3, 4, 5, 7, 9, 10, 11, 14, 15, 18, 22, 23, 24, 27, 31 Apr 7, 8

Dates of Examination of principal parts—Cylinders 14/2/38 Slides 28/2/38 (4 popple) Covers 14/2/38  
Pistons 28/1/38, 28/2/38 Piston Rods 28/2/38 Connecting rods 5/3/38  
Crank shaft 11/2/38 & 16/2/38 Thrust shaft 16/2/38 Intermediate shafts 8/3/38  
Tube shaft — Screw shaft 10/3/38 Propeller 10/3/38  
Stern tube 25/2/38 Engine and boiler seatings 15/2/38 Engines holding down bolts 25/2/38

Completion of fitting sea connections 1/3/38 Boilers fixed 22/3/38 Engines tried under steam 29/3/38  
Completion of pumping arrangements 30/3/38 Thickness of adjusting washers 5th 5 1/2" alt. Port: 7 1/2" 5th 5 1/2" port. 1 1/4" superheat  
Main boiler safety valves adjusted 29/3/38 Crank shaft material steel Identification Mark 7048 Thrust shaft material steel Identification Mark 7048  
Intermediate shafts, material steel Identification Marks 7048 Tube shaft, material — Identification Mark —  
Screw shaft, material steel Identification Mark 7048 Steam Pipes, material steel Test pressure 660 lb Date of Test 25.3.38  
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 —  
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with not required  
Is this machinery duplicate of a previous case no If so, state name of vessel —

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

The machinery of this vessel has been constructed under  
Special Survey in accordance with the approved Plans,  
Secretary's letters and the requirements of the Rules.

The Workmanship and materials are good. The machinery has  
been efficiently fitted on board and tried under working  
conditions with satisfactory results and is slight, in  
my opinion, for the

NOTATION + L.M.C. 438

The amount of Entry Fee ... £ 5 : : When applied for,  
Special ... £ 77 : 19 : 14 Apr 1938  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ : : 21 4 1938

Committee's Minute

Assigned

+ Lmb 4.38  
FD, Cl.  
2 SB (44) 1 Amp LB

FRI, 22 APR 1938

L.R. Home.

Engineer Surveyor to Lloyd's Register of Shipping.

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