

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

10 FEB 1937

Date of writing Report

19

When handed in at Local Office

1. 2.

1937

Port of

Glasgow

No. in Survey held at
Reg. Book.

Date, First Survey

24. 4. 36

Last Survey

27-1-

1937

(Number of Visits

77

Gross 5205

Net 3126

on the

new steel S/S "DARLENY"

Built at

Port Glasgow

By whom built

Wm Hamilton & Co Ltd

Yard No. 427

When built 1937

Engines made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No. 1001

When made 1937

Boilers made at

Glasgow

By whom made

David Rowan & Co Ltd

Boiler No. 1001

When made 1937

Registered Horse Power

ex. compressed

Owners

Douglas & Ramsey

Port belonging to

Glasgow

Nom. Horse Power as per Rule

422

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

Trade for which Vessel is intended

455 FOR R.B.

ENGINES, &c.—Description of Engines

Triple expansion

Revs. per minute

Dia. of Cylinders

22-36-65

Length of Stroke

48"

No. of Cylinders

3

No. of Cranks

3

Crank shaft, dia. of journals

as per Rule 13.083

as fitted 13 1/2"

Crank pin dia.

13 1/2"

Crank webs

Mid. length breadth 20 1/2"

Mid. length thickness 8 5/8"

shrink

Thickness parallel to axis 8 5/8"

Thickness around eye-hole 6 3/8"

Intermediate Shafts, diameter

as per Rule 12.46"

as fitted 12 3/4"

Thrust shaft, diameter at collars

as per Rule 13.083"

as fitted 13 1/2" Mitchell

Tube Shafts, diameter

as per Rule -

as fitted -

Screw Shaft, diameter

as per Rule 14"

as fitted 14 1/2"

Is the tube screw

shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule .126"

as fitted 3/4"

Thickness between bushes

as per Rule .54"

as fitted 1/16"

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

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

yes

shaft

no

If so, state type

-

Length of Bearing in Stern Bush next to and supporting propeller

4-10"

Propeller, dia.

18-6

Pitch

19-6

No. of Blades

4

Material

Bronze

whether Movable

no

Total Developed Surface

110

sq. feet

Feed Pumps worked from the Main Engines, No.

1

Diameter

4 1/2"

Stroke

27"

Can one be overhauled while the other is at work

-

Bilge Pumps worked from the Main Engines, No.

2

Diameter

4 1/2"

Stroke

27"

Can one be overhauled while the other is at work

yes

Feed Pumps { No. and size one @ 9 1/2" - 7 x 21"

How driven

steam

Pumps connected to the

Main Bilge Line

No. and size Ballast pump

How driven

steam

Ballast Pumps, No. and size one @ 10 1/2" x 12"

Lubricating Oil Pumps, including Spare Pump, No. and size

none

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 3/4"

In Pump Room

-

In Holds, &c. N°1 hold - 2 @ 3 1/2". N°2 hold & N°3 hold combined - 2 @ 3 3/4"

N°4 hold - 4 @ 3 1/4". N°5 hold - 4 @ 3 1/4". Tunnel well - 1 @ 2 1/2". All fitted at Eye.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size 1 @ 5"

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

What Pipes pass through the bunkers

What pipes pass through the deep tanks

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 6140 sq. ft.

Is Forced Draft fitted

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

IS A DONKEY BOILER FITTED?

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

PLANS. Are approved plans forwarded herewith for Shafting

(If not state date of approval)

Superheaters

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

one screw shaft and one propeller.

The foregoing is a correct description,

For David Rowan & Co. Ltd

Arch. W. Greerson

Manufacturer.

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Lloyd's Register

Foundation

00917-00924-0099

1936 Apr.: 24. 29 May.: 8. 13. 21. 27. 29 June.: 2. 5. 17. 23. 29 July.: 6. 14 Aug.: 5. 7. 12.
 During progress of work in shops - - 13. 17. 18. 19. 24. 26. 27 Sep.: 1. 4. 8. 10. 11. 14. 18. 23. 24. 30 Oct.: 1. 5. 6. 8. 12. 14. 16. 19. 20
 21. 22. 28. 29. 30 Nov.: 2. 4. 5. 6. 11. 12. 18. 20. 30 Dec.: 2. 4. 7. 8. 11. 14. 15. 17. 21. 22. 26. 30. 31
 During erection on board vessel - - 1937 Jan.: 8. 9. 11. 19. 20. 25. 27
 Total No. of visits 77

Dates of Examination of principal parts—Cylinders 5-10-36 Slides 2-11-36 Covers 30-9-36
 Pistons 24-8-36 Piston Rods 29-10-36 Connecting rods 11-9-36
 Crank shaft 8-9-36 Thrust shaft 18-9-36 Intermediate shafts 14-9-36
 Tube shaft — Screw shaft 22-10-36 29-10-36 Propeller 16-10-36 29-10-36
 Stern tube 30-11-36 Engine and boiler seatings ENR Engines holding down bolts 30-12-36
 Completion of fitting sea connections ENR
 Completion of pumping arrangements 19-1-37 Boilers fixed 30-12-36 Engines tried under steam 27-1-37
 Main boiler safety valves adjusted 19-1-37 Thickness of adjusting washers main boiler—all 5/16" any boiler both 11/32"
 Crank shaft material J. Steel Identification Mark * LLOYD'S NO 6184 P.F. 8-9-36 Thrust shaft material J. Steel Identification Mark * LLOYD'S NO 6184 L.C.D. 18-9-36
 Intermediate shafts, material J. Steel Identification Marks * LLOYD'S NO 6184 L.C.D. 14-9-36 Tube shaft, material — Identification Mark * LLOYD'S NO 6184 L.C.D. 18-9-36
 Screw shafts material J. Steel Identification Mark * LLOYD'S NO 6184 L.C.D. 22-10-36 W 29-10-36 W Steam Pipes, material Steel Test pressure 660 Date of Test 30-10-36
 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 —
 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.)
 * Each forging is stamped with its original number as per forging reports herewith - in addition to the marks shown above.
 The machinery is fitted with a Rowan Götaväken Turbo compressor (T.C. 61) for particular of turbo compressor see separate report on form 10. Copy herewith.
 The following data was obtained during the trial trip.

	HP Exhaust press	HP Exhaust Temp	MP Steam press	MP Steam Temp	LP Steam press	Condenser Vac	Revs
Without Turbo compressor	55 lb	293°	55 lb	293°	12 lb	28.75"	64
With Turbo compressor in action	48 lb	285°	82 lb	355°	16 lb	28.75"	71

The materials and workmanship are good.
 The machinery has been constructed under Special Survey. It is eligible in my opinion for Classification with Record + LMC 1,37 and notation "Exhaust turbine driving Steam compressor".

The amount of Entry Fee ... £ 5 :
 Special ... £ 88 : 6
 Donkey Boiler Fee ... £ :
 Travelling Expenses (if any) £ :
 When applied for, 9-FEB 1937
 When received, 13-2 37 15/2

Schdau's
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 9-FEB 1937

Assigned + L.M.C. 1,37 Exhaust Turbine driving Steam Compressor.