

Rpt. 4.

No. 52049.

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

22 JUN 1943

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of HULL

5-4-43.5

No. in Survey held at HULL

Date, First Survey

30<sup>th</sup> October 1942

Last Survey

26<sup>th</sup> May 1943

Reg. Book

(Number of Visits 42)

on the H.M. Trawler

BOMBARDIER

Built at BEVERLEY

By whom built

Cook, Welton &amp; Gemmell

Card No. 708

Tons Gross 580

Net 182

When built 1943

Engines made at HULL

By whom made

Chas. J. Holmes &amp; Co.

Engine No. 1641

When made

Boilers made at HULL

By whom made

Chas. J. Holmes &amp; Co.

Boiler No. 1641

When made

Registered Horse Power

Owners

Admiralty

Port belonging to

Nom. Horse Power as per Rule

165

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

YES

Trade for which vessel is intended

Government Service

## ENGINES, &amp;c.—Description of Engines

Triple Expansion

CONTRACT. Revs. per minute 123.

Dia. of Cylinders 15" 25" 42"

Length of Stroke 27"

No. of Cylinders 3

No. of Cranks 3

Crank shaft, dia. of journals

as per Rule 8.37

Crank pin dia. 8 1/2"

Crank webs

Mid. length breadth 16 1/8"

Thickness parallel to axis 5 1/2"

as fitted 8 1/2"

as per Rule 7.97

Mid. length thickness 5 1/2"

shrink

Thickness around eye-hole 3 1/16"

Intermediate Shafts, diameter

as per Rule 8 1/8"

as fitted 8 1/8"

Thrust shaft, diameter at collars

as per Rule 8.37"

as fitted 8 1/2"

Tube Shafts, diameter

as per Rule

as fitted None

Screw Shaft, diameter

as per Rule 8.86"

as fitted 9"

Is the

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule 5.66"

as fitted 1 3/4"

Thickness between bushes

as per Rule 3.11"

as fitted 1 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

Continuous

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

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller 42"

Propeller, dia. 10.9"

Pitch 11'-0"

No. of Blades 4

Material C.I.

whether Moveable Solid

Total Developed Surface 42 1/2 sq. feet

Feed Pumps worked from the Main Engines, No. 2

Diameter 2 7/8"

Stroke 16"

Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2

Diameter 2 7/8"

Stroke 16"

Can one be overhauled while the other is at work Yes

Feed Pumps No. and size One 6" x 4 1/2" x 6" Duplex

Pumps connected to the

Main Bilge Line No. and size One 7" x 5" x 6" Duplex

How driven Independent Beam

How driven Independent Beam

Also one 3" Steam Ejector

Ballast Pumps, No. and size One 7" x 5" x 6" Duplex

Lubricating Oil Pumps, including Spare Pump, No. and size None

Are two independent means arranged for circulating water through the Oil Cooler

None

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps:—In Engine and Boiler Room

2 @ 2" One @ 3"

In Pump Room

In Holds, &amp;c. One @ 2" dia in each of the following spaces:—

Magazine, Gunner's Store, Spirit Room, D.C. Store, Forward Hold and After Peak

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 5"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size One 3" Steam Ejector

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 Bolt

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 Above

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 Forward Suctions

How are they protected Plated

What pipes pass through the deep tanks None

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

Is it fitted with a watertight door

worked from

## MAIN BOILERS, &amp;c.—(Letter for record 5)

Total Heating Surface of Boilers 2451 sq. ft.

Which Boilers are fitted with Forced Draft Yes

Which Boilers are fitted with Superheaters None

No. and Description of Boilers One S.B.

Working Pressure 225 lb./sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded?

Can the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting 19-8-42

Main Boilers 29-5-42

Auxiliary Boilers

Donkey Boilers

(If not state date of approval)

Superheaters

General Pumping Arrangements 21-7-42

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 See attached list

One Set Piston rings Steam and Water for all auxiliaries

Rings and Springs for M.P. &amp; L.P. Pistons

2 Eccentric Rods and Springs for Main Engine

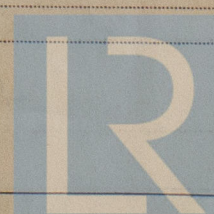
One Plummer Block

3 M.E. Cylinder Escape Valve Springs

The foregoing is a correct description.

FOR CHARLES D. HOLMES &amp; CO., LTD.

Manufacturer.



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Lloyd's Register Foundation

W1090-0178

# BOMBARDIER.

1942 Oct 30 Nov 6, 13 Dec. 14, 17, 18, 21, 29. - 1943 Jan. 1, 4, 5, 8, 15, 19, 20, 21, 22, 29. Feb. 5, 8, 9, 12, 13, 19, 22, 23, 26.  
 During progress of work in shops - - Jan. 1, 4, 5, 12, 15, 16, 18, 19, 30. April 5, 14, 21, 23.  
 Dates of Survey while building During erection on board vessel - - 1943 Jan 13 Mar 4, 18, 30. Apr 8, 13, 16, 28, 29. May 4, 5, 7, 12, 14, 15, 16, 25, 26.  
 Total No. of visits 112

Dates of Examination of principal parts - Cylinders 9/2/43, 22/4/43, 21/1/43. Slides 29/1/43. Covers 9/2/43, 22/4/43, 21/1/43.  
 Pistons 5/2/43, 12/3/43, 14/3/43. Piston Rods 12/2/43. Connecting rods 5/2/43.  
 Crank shaft 12/2/43. Thrust shaft 20-1-43. Intermediate shafts 8-1-43.  
 Tube shaft None. Screw shaft 4-1-43. Propeller 27/3/43.  
 Stern tube 13/1/43. Engine and boiler seatings 30/3/43. Engines holding down bolts 5/4/43.  
 Completion of fitting sea connections 28/4/43. Boilers fixed 5/4/43. Engines tried under steam 23-4-43, 15-5-43.  
 Completion of pumping arrangements 28/4/43. Thickness of adjusting washers P 1 3/32" S 1 13/32".  
 Main boiler safety valves adjusted 23-4-43. Crank shaft material F.I. Steel Identification Mark 281 F.W. 20-10-42. Thrust shaft material F.I. Steel Identification Mark 810 F.W. 1-11-42.  
 Intermediate shafts, material F.I. Steel Identification Marks 281 F.W. 1/11/42. Tube shaft, material None Identification Mark -.  
 Screw shaft, material F.I. Steel Identification Mark 353 F.W. Steam Pipes, material Steel Test pressure 675 lb Date of Test 5/4/43.  
 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 Yes. If so, state name of vessel H.M.T. GRENADIER. Hull Rpt.

General Remarks (State quality of workmanship, opinions as to class, etc.)  
 The Machinery of this Vessel has been constructed in accordance with the approved Admiralty plan, the Specification, and the Society's Rules, of listed materials supplied by firms approved by the Society.  
 The Workmanship and Materials are good.  
 The Machinery and Auxiliaries have been fitted aboard and when tried under steam at or near full power as practicable in the basin were found satisfactory in every respect.  
 The Vessel is eligible, in our opinion, when classed to have records of LMC 5, #3 and T.S.(CL) and the Notation T. 3 Cy. 15"-25"-42" - 87. 164 NHP. 225 Gr. 15 B. 3 Cf. G.S. 64. H.S. 2551. F.O.

The amount of Entry Fee ... £ 4 : 0 : 0 When applied for, 22 JUN 1943  
 Special ... £ 40 : 0 : 0  
 Donkey Boiler Fee ... £ 4 : 0 : 0  
 Travelling Expenses (if any) £ : : : When received, 19.  
 Committee's Minute ... FRI. 9 JUL 1943  
 Assigned ... + LMC 5, 43. 3. D. CL.

H. I. Shield  
 J. Philpott  
 Engineer Surveyor to Lloyd's Register of Shipping.