Rpt. 4.

No. 51951.

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 31 MAR 1943

Date of writing Report 20-1-43 19 When handed in at Local Office 19 Port of Hull

No. in Reg. Book Survey held at Beverley Hull Date, First Survey 10. 8. 42 Last Survey 8. 3. 1943 (Number of Visits 43)

on the H.M.T. LANCER Tons Gross 580 Net 182

Built at BEVERLEY. By whom built Cook Welton & Gemmell Ltd Yard No. 704. When built 1943

Engines made at HULL By whom made Chas. D. Holmes & Co Ltd Engine No. 1635. When made

Boilers made at HULL. By whom made Chas. D. Holmes & Co Ltd Boiler No. 1635. When made

Registered Horse Power Owners The 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, &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. as fitted 8½". Crank pin dia. 8½". Crank webs Mid. length breadth 16⅛" Mid. length thickness 5½" Thickness parallel to axis 5½" shrunk Thickness around eye-hole 3 13/16".

Intermediate Shafts, diameter as per Rule 7.97". 7.98 as fitted 8⅛". Thrust shaft, diameter at collars as per Rule 8.37" as fitted 8½".

Tube Shafts, diameter as per Rule — as fitted None Screw Shaft, diameter as per Rule 8.867" as fitted 9". Is the {tube / screw} shaft fitted with a continuous liner {— / Yes.}

Bronze Liners, thickness in way of bushes as per Rule .566. as fitted 19/32" Thickness between bushes as per Rule .311 as fitted ½". 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 shaft. None 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.1. whether Moveable Solid Total Developed Surface 42½ sq. feet

Feed Pumps worked from the Main Engines, No. 2. Diameter 2 5/8" Stroke 16" Can one be overhauled while the other is at work Yes.

Bilge Pumps worked from the Main Engines, No. 2. Diameter 2 5/8" Stroke 16" Can one be overhauled while the other is at work Yes.

Feed Pumps {No. and size One 6"×4¼"×6" Duplex / How driven Steam.} Pumps connected to the Main Bilge Line {No. and size One 7"×5"×6". Duplex / How driven Independent Steam. Also One 3" Ejector.}

Ballast Pumps, No. and size One 7"×5"×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" Dia. One @ 3" Dia.

In Pump Room — In Holds, &c. One @ 2" Dia in each of the following:—Magazine Gunners Store. Spirit Room. D.C. Store, Fwd. Hold and Aft. Peak

Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 5" Dia. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3" Dia Bilge 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 & 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 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 Fwd 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 None Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2551 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 lbs /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.

1 Set Piston rings, Steam & Water ends for all Auxiliaries.
Rings & Springs for MP & LP Pistons.
2 Eccentric Rods and Straps for Main Engine.
1 Plummer Block
3 Main Engine Cylinder Escape Valve Springs

The foregoing is a correct description.

FOR CHARLES D. HOLMES & CO., LTD.

C. P. Evans

Manufacturer.

LANCER.

Dates of Survey while building	During progress of work in shops - -	1942. Aug 10. Sept. 24, 25. Oct 2, 7, 9, 15, 16, 19, 21, 24, 26, 27, 28, 30. Nov. 3, 5, 6, 11, 12, 13, 16, 19, 25, Dec. 1, 5, 7, 16, 18, 21. 1943. Jan 8, 21. Mar. 4.
	During erection on board vessel - - -	1942. Oct 2, 24. Nov 19. Dec. 30. 1943. Jan. 8, 11, 15, 16, 18, 20, 21, 22, 25, 26, 27, 28, 29, 30. Feb 2, 3, 6, 9, 10, 12, 16, 19, 20, 22, 23, 24, 25, 26, 27. Mar 1, 2, 3, 4, 5, 6, 8.
	Total No. of visits	73.

Dates of Examination of principal parts—Cylinders 5/11/42. 30/10/42. 27/10/42. Slides 25/11/42. Covers 5/11/42. 30/10/42. 27/10/42.

Pistons 6/11/42. 16/11/42. Piston Rods 6/11/42. Connecting rods 13/11/42.

Crank shaft 11/11/42. Thrust shaft 7/10/42. Intermediate shafts 19/10/42.

Tube shaft NONE. Screw shaft 21/10/42. Propeller 30/12/42.

Stern tube 2·10·42. Engine and boiler seatings 19·10·42. Engines holding down bolts 15·1·43.

Completion of fitting sea connections 24·10·42.

Completion of pumping arrangements 30·1·43. Boilers fixed 21·1·43. Engines tried under steam 30·1·43. 26·2·43.

Main boiler safety valves adjusted 30·1·43. Thickness of adjusting washers P $\frac{15}{32}$". S $\frac{7}{16}$".

Crank shaft material F.1. Stl. Identification Mark Coupling 8807. Journal 8808. CP. 23-7-42. Pins 7583. CP. 23/6/42. Thrust shaft material F.1. Stl. Identification Mark 8740 CP. 7/7/42.

Intermediate shafts, material F.1. Stl. Identification Marks 8805. CP. 23-7-42. Tube shaft, material NONE. Identification Mark ——

Screw shaft, material F.1. Stl. Identification Mark 8804 CP. 23-7-42. Steam Pipes, material S.D. Steel. Test pressure 675 lb. Date of Test

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 HUL. RPT. No 51932.

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

The Machinery of this Vessel has been constructed in accordance with the approved Admiralty plans, the Specification and the Society's Rules of tested material supplied by firms accredited by the Society.

The Workmanship and Materials are good.

The Machinery and Auxiliaries have been fitted aboard and, when tried under steam at as 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 the records of ✠ LMC 3,43. and T.S. (CL). and the Notation T. 3Cy. 15". 25". 42" — 27". 165 NHP. 225 lb. 1 SR. 3 cf. G.S. 64. H.S. 2551. FD.

W. S. Shields
J. Fleming

Engineer Surveyors to Lloyd's Register of Shipping.

The amount of Entry Fee	... £	4 : –	:	When applied for, 21 MAR 1943
Special ...	... £	40 : –	:	
Specification (M)	£	41 : –		
Donkey Boiler Fee ...	... £		:	When received,
Travelling Expenses (if any)	£		:	19

Certificate to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

FRI. 9 APR 1943

Committee's Minute

Assigned See Hul F.E. 51951 + Lmc. 3.43. FD, Cly