

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office. **13 DEC 1944**

When handed in at Local Office. **12 DEC 1944** Port of **HULL**

Date, First Survey **6.11.43** Last Survey **3.12.1944**  
 (Number of Visits **64**)

on the **STEAM TUG ENFORCER** A/MS **792** Tons {Gross **762.24**  
 Net **77.82**

built at **SELBY** By whom built **Cochrane & Co Ltd** Yard No. **1288** When built **1944**

Engines made at **HULL** By whom made **Chas. D. Holmes & Co** Engine No. **1680** When made **1944**

Boilers made at **HULL** By whom made **Chas. D. Holmes & Co** Boiler No. **1680** When made **1944**

Registered Horse Power **269** Owners **The Admiralty** Port belonging to **—**

Horse Power as per Rule **269** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

Use for which vessel is intended **For Towing Services.**

**TRIPLE EXPANSION** CONTRACT Revs. per minute **120**

Cylinders **18", 29 1/2", 49"** Length of Stroke **34"** No. of Cylinders **3** No. of Cranks **3**

as per Rule **10.09"** Mid. length breadth **—** Thickness parallel to axis **6 5/8"**  
 as fitted **10 1/4"** Crank pin dia. **10 1/4"** Crank webs shrunk Thickness around eye-hole **4 5/8"**  
 as per Rule **9.6"** Mid. length thickness **—** Thrust shaft, diameter at collars as per Rule **10.09"**  
 as fitted **9 3/8"** as fitted **10 1/4"**

as per Rule **—** Screw Shaft, diameter as per Rule **11.037"** Is the {tube} shaft fitted with a continuous liner { **No.**  
 as fitted **NONE** as fitted **11 1/4"** as fitted {screw}

Liners, thickness in way of bushes as per Rule **—** Thickness between bushes as per Rule **—** Is the after end of the liner made watertight in the boss **Yes.**  
 as fitted **—** as fitted **—** If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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 **—**

Bushes 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.**  
 If so, state type **NEWARK OIL GLAND** Length of Bearing in Stern Bush next to and supporting propeller **3'-10 1/2"**

dia. **1'-10 1/2"** Pitch **12'-0"** No. of Blades **4** Material **C.I.** whether Moveable **Slid.** Total Developed Surface **53** sq. feet

Comps worked from the Main Engines, No. **NONE** Diameter **—** Stroke **—** Can one be overhauled while the other is at work **—**

Comps worked from the Main Engines, No. **Two** Diameter **3 1/4"** Stroke **18 1/2"** Can one be overhauled while the other is at work **Yes.**

No. and size **Two Weir 6" x 8 1/2" x 18". One Duplex 7" x 5" x 6"** pumps connected to the Main Bilge Line {No. and size **One 7" x 7" x 8" Duplex 3" Ejector**  
 How driven **Independent Steam** How driven **Independent Steam**

Pumps, No. and size **One 7" x 7" x 8" Duplex** Lubricating Oil Pumps, including Spare Pump, No. and size **NONE**

independent means arranged for circulating water through the Oil Cooler **NONE** Suctions, connected to both Main Bilge Pumps and Auxiliary pumps:—In Engine and Boiler Room **2 @ 2 1/2", 2 @ 3" Steam Ejector, 3 @ 1 1/2" in Gutterways**  
 In Room **COFFERDAM One @ 2" dia** In Holds, &c. **One @ 2" dia in each of the following:—**  
**2 Peak, Water Ballast, Port & Star & Apr Peak**

Water Circulating Pump Direct Bilge Suctions, No. and size **One @ 7"** Independent Power Pump Direct Suctions to the Engine Room Bilges, size **One 3" Steam Ejector** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes **Yes.**

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.**

Sea Connections fitted direct on the skin of the ship **VALVES, COCKS, DIRECT** Are they fitted with Valves or Cocks **B At**

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.**

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.**

Pipes pass through the bunkers **NONE** How are they protected **—**

Pipes pass through the deep tanks **NONE** Have they been tested as per Rule **—**

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **Yes.**

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 **—**

**BOILERS, &c.**—(Letter for record **S**) Total Heating Surface of Boilers **4300** ft<sup>2</sup>

Boilers are fitted with Forced Draft **ALL** Which Boilers are fitted with Superheaters **NONE**

Description of Boilers **Two S.B.** Working Pressure **220 lb/10"**

REPORT ON MAIN BOILERS NOW FORWARDED? **Yes.**

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

Is a donkey boiler be used for domestic purposes only **1**

NS. Are approved plans forwarded herewith for Shafting **6-5-43** Main Boilers **15-3-43** Auxiliary Boilers **—** Donkey Boilers **—**

(If not state date of approval)

General Pumping Arrangements **28-6-43** Oil fuel Burning Piping Arrangements **6-10-43**

**SPARE GEAR.**

Is spare gear required by the Rules been supplied **Yes.**

Is the principal additional spare gear supplied **As per Specification.**

The foregoing is a correct description.  
 CHARLES D. HOLMES & CO., LTD  
 W.R. Evans

Manufacturer.



1943. Nov. 6. Jan. 18. Feb. 3. 8. Apr. 20. 28. May 5. 12. 19. 25. 26. June 2. 5. 9. 16. 23. 29. July 5. 10. 13. 15. 17. 19. 20. 22. 24. Aug 10. 11. 25. 30. 31. Sept 1. 8. 19. 22. Oct 4. 26. Nov. 6.

1944 APR 18 JUN 29 JUL 21, 26 SEP 1, 12 OCT 3, 20, 27, 31 NOV 1, 3, 10, 13, 17, 20, 21, 23

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits 64.

Dates of Examination of principal parts - Cylinders 22/1/44. 19/7/44. 27/7/44 Slides 31/8/44 Covers 22/7/44 19/7/44 27/7/44

Pistons 19/2/44 Piston Rods 17/8/44 Connecting rods 8/9/44

Crank shaft 30/8/44 Thrust shaft 19-7-44 Intermediate shafts 5-7-44

Tube shaft - Screw shaft 29-6-44 Propeller 21-7-44

Stern tube 29-6-44 Engine and boiler seatings 26-7-44 Engines holding down bolts 26-10-44

Completion of fitting sea connections 21-7-44

Completion of pumping arrangements 17-11-44 Boilers fixed 20-10-44 Engines tried under steam 17/11/44 1/12

Main boiler safety valves adjusted 17-11-44 Thickness of adjusting washers FOBLR P 13/32 S 3/8 AFTBLR P 13/32 S 5/16

Crank shaft material F.I. Steel Identification Mark 2478 CP. 26/44 Thrust shaft material F.I. STEEL Identification Mark NEW 19

Intermediate shafts, material D<sup>o</sup> Identification Mark LLOYD'S NO 2681, CP, 9-6-44 Tube shaft, material - Identification Mark

Screw shaft, material D<sup>o</sup> Identification Mark LLOYD'S NO 2473 CP, 18-4-44 Steam Pipes, material STEEL Test pressure 660 lb Date of Test 6/11

Is an installation fitted for burning oil fuel YES Is the flash point of the oil to be used over 150° F. YES

Have the requirements of the Rules for the use of oil as fuel been complied with YES

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 STM. TUG ENVOY HULL RPL. 5246

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

The Machinery of the vessel has been constructed in accordance with the approved plans, the Rules and the Specification, of tested material made from accredited by the Society.

The Workmanship and Material are good

The Machinery and Auxiliaries have been fitted on board and were tried at full power under steam in the river and found satisfactory in every respect.

The vessel is eligible in our opinion to be classed \* LMC 12,440.G.

With notation T. 3cy 18", 29 1/2", 49" - 34". 269 NHP 220 lb 25B.

6 c.f. H.S. 4300 # F.D.

Fitted for Oil fuel. F.P. above 150° F.

Certificate to be sent to

The amount of Entry Fee	£ 4 : 0	When applied for, 12 DEC 1944
Special + LMC... SPECIFICATION	£ 65 : 7	
Donkey Boiler Fee	£ 16 : 7	When received, 19
Travelling Expenses (if any)	£ :	

W. Shields & J. Fuller  
Engineer Surveyors to Lloyd's Register of Shipping

FRI, 12 JAN 1945

Committee's Minute

Assigned + LMC 12.44 F.D. O.G.

FITTED FOR OIL FUEL. 12.44 FLASH POINT ABOVE 150° F.



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