

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 25 AUG 1941

Date of writing Report *19* When handed in at Local Office *20. 8. 41* Port of *Belfast*

No. in Survey held at *Belfast* Date, First Survey *25 Jan 1941* Last Survey *13 Aug 1941*

Reg. Book. *STEEL SC* " *COMSLIP*" (Number of Visits *80*)

Built at *Belfast* By whom built *Messrs Harland, Wolff Ltd* Yard No. *1105* Tons *Gross 811.39*
Net 301.14

Engines made at *Belfast* By whom made *Harland, Wolff Ltd* Engine No. *1102* When built *1941*

Boilers made at *Belfast* By whom made *Harland, Wolff Ltd* Boiler No. *1102* when made *1941*

Registered Horse Power *399* Owners *The Admiralty* Port belonging to *-*

Nom. Horse Power as per Rule *399* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

Trade for which Vessel is intended *Admiralty Service*

ENGINES, &c.—Description of Engines *Low Cylinder Inverted Triple Expansion* Revs. per minute *185*

Dia. of Cylinders *18 1/2" x 31" x 38 1/2" x 38 1/2"* Length of Stroke *30"* No. of Cylinders *4* No. of Cranks *4*

Crank shaft, dia. of journals as per Rule *10.035"* as fitted *10 1/2"* Crank pin dia. *10 1/2"* Crank webs Mid. length breadth *16 3/4"* Thickness parallel to axis *6 1/2"*
 Mid. length thickness *6 1/2"* shrunk Thickness ground eye-hole *4 3/4"*

Intermediate Shafts, diameter as per Rule *9.557"* as fitted *10 1/4" at ends increased to 15 1/4" in body* Thrust shaft, diameter at collars as per Rule *10.035"* as fitted *10 1/2"*

Tube Shafts, diameter as per Rule *19.68/92* as fitted *10 7/8"* Is the *main* shaft fitted with a continuous liner *Yes*

Bronze Liners, thickness in way of bushes as per Rule *5/8"* as fitted *5/8"* Thickness between bushes as per Rule *1 1/2"* 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 *One length*

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 *Yes* Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft *No* If so, state type *-* Length of Bearing in Stern Bush next to and supporting propeller *5'-0"*

Propeller, dia. *10'-6"* Pitch *10'-8"* No. of Blades *3* Material *Man. Bronze* whether Moveable *Solid* Total Developed Surface *31* 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. *-* Diameter *-* Stroke *-* Can one be overhauled while the other is at work *-*

Feed Pumps { No. and size *2 off 8 1/2" x 6" x 18" MAIN* Pumps connected to the { No. and size *2 off 50 tons/hr each - One 5" Donkey Pump*
 { How driven *1 off 10 1/2" x 8" x 22" Aux.* Main Bilge Line { How driven *Steam* *Hand*

Ballast Pumps, No. and size *As for Bilge.* Lubricating Oil Pumps, including Spare Pump, No. and size *-*

Are two independent means arranged for circulating water through the Oil Cooler *Yes* Suctions, connected to *both* Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room *ENG. ROOM 2 @ 3"* *BOILER ROOM 4 @ 3"* (including the 3 direct In Holds, &c. *12 @ 2"*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *One @ 9 1/2"* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *One @ 3" in E.R. + one @ 3" in each B.R. Room* 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 *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 *at water line*

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 (Leaking Cocks only)* How are they protected *-*

What pipes pass through the deep tanks *-* Have they been tested as per Rule *Yes*

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 *-* worked from *-*

MAIN BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers *6852 sq. ft.*

Is Forced Draft fitted *Yes* No. and Description of Boilers *2 S.E. Multitubular "Howden Johnson"* Working Pressure *225 lbs/sq. in.*

IS A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes*

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

PLANS. Are approved plans forwarded herewith for Shafting (If not state date of approval) *Plan approved at London.* Main Boilers *-* Auxiliary Boilers *-* Donkey Boilers *-*

Superheaters *-* General Pumping Arrangements *-* Oil fuel Burning Piping Arrangements *-*

SPARE GEAR. State the articles supplied:— *As per Rule Requirements* *Please see attached list.*

The foregoing is a correct description,
 For HARLAND AND WOLFF, LIMITED,
AT Marshall
 Secretary.

Manufacturer.



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84001

1941
 Jan 25 Feb 21, 24, 25 Mar 3, 5, 6, 7, 14, 15, 18, 20, 25, Apr 4, 5, 6, 7, 10, 15, 18, 22, 26 May 13

Dates of Survey while building
 During progress of work in shops - - 10, 13, 14, 15, 16, 19, 20, 22, 23, 26, 27, 29, 31 June 2, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 23, 24, 25, 26, 27, 30
 During erection on board vessel - - - July 2, 3, 4, 7, 8, 9, 16, 17, 18, 19, 21, 22, 23, 24, 25, 28, 30, Aug 4, 5, 6, 7, 8, 9, 13
 Total No. of visits 80

Dates of Examination of principal parts—Cylinders 21.3.41 to 24.4.41 Slides 21.3.41 to 24.4.41 Covers 21.3.41 to 24.4.41
 Pistons 4.4.41 Piston Rods 4.4.41 Connecting rods 3.4.41
 Crank shaft 28.3.41 Thrust shaft 17.2.41 Intermediate shafts 1.3.41
 Tube shaft - Screw shaft 19.5.41 Propeller 3.5.41
 Stern tube 20.5.41 Engine and boiler seatings 27.5.41 Engines holding down bolts 17.6.41
 Completion of fitting sea connections 27.5.41
 Completion of pumping arrangements 24.7.41 Boilers fixed 11.6.41 Engines tried under steam 24.7.41 & 6.8.41
 Main boiler safety valves adjusted 24.7.41 Thickness of adjusting washers FORD. B.R. P 1/32" S. 1/32" F. AFTER B.R. P 1/32" S. 1/64"
 Crank shaft material Steel Identification Mark LLOYDS No. 1027 RS 24.3.41 Thrust shaft material Steel Identification Mark LLOYDS No. 376 RS 17.2.41
 Intermediate shafts, material Steel Identification Marks LLOYDS No. 376 RS 1.3.41 Tube shaft, material - Identification Mark -
 Screw shaft, material Steel Identification Mark LLOYDS No. 379 RS 19.5.41 Steam Pipes, material S.D. Steel Test pressure 675 lbs/sq. in Date of Test 29.1.41 / 12.6.41
 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 -
 Is this machinery duplicate of a previous case Yes If so, state name of vessel "ABEHA" etc BEL. REG. No 12885

General Remarks (State quality of workmanship, opinions as to class, &c.)
 These engines have been constructed under Special Survey in accordance with the Rules and approved plans.
 The materials and workmanship are good.
 This machinery has been efficiently installed aboard the vessel and tried out under full working conditions at sea, with satisfactory results.

In my opinion the vessel is eligible for the notation of
 LMC S, 41 CL 2SB 225 lbs. F.D.

The amount of Entry Fee ... £ : :
 Special ... £ 170 : :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 21. 8. 1941
 When received, 19

R. Lee James, Engineer Surveyor to Lloyd's Register of Shipping.
 Glen S. Thomas

Committee's Minute
 Assigned
 Fri. 29 AUG 1941
 J. L. M. B. S. 41
 J. L. M. B. S. 41 &
 J. D., C. L.



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