

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

2 DEC 1940

Received at London Office

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Date of writing Report *2 Dec 1940* When handed in at Local Office *19* Port of *HULL*

No. in Survey held at *Hull & Selby* Date, First Survey *1 Dec 1939* Last Survey *22nd Nov 1940*
 Reg. Book. *19* (Number of Visits *1*)

on the *Single Screw Steamer* "**PRUDENT**" Tons { Gross *597*
 Net *5*

Built at *Selby* By whom built *Cochrane & Sons Ltd* Yard No. *1218* When built *1940*

Engines made at *Hull* By whom made *Charles D. Holmes & Co* Engine No. *1563* When made *do*

Boilers made at *do* By whom made *do* Boiler No. *do* When made *do*

Registered Horse Power *222* Owners *The Admiralty* Port belonging to *do*

Nom. Horse Power as per Rule *222* Is Refrigerating Machinery fitted for cargo purposes *do* Is Electric Light fitted *Yes*

Trade for which Vessel is intended *Yes*

ENGINES, &c.—Description of Engines *Triple Expansion* Revs. per minute *122*

Dia. of Cylinders *17" - 28" - 46"* Length of Stroke *33"* No. of Cylinders *3* No. of Cranks *3*

Crank shaft, dia. of journals *9.46"* as per Rule *9.46"* Crank pin dia. *9.5/8"* Crank webs *1* Mid. length breadth *1* Thickness parallel to axis *6 1/8"*
 as fitted *9.5/8"* Mid. length thickness *1* shrunk Thickness around eye-hole *4 5/16"*

Intermediate Shafts, diameter *9.01"* as per Rule *9.01"* Thrust shaft, diameter at collars *9.46"* as per Rule *9.46"*
 as fitted *9 1/4"* as fitted *9 5/8"*

Tube Shafts, diameter *9.99"* as per Rule *9.99"* Is the { tube } shaft fitted with a continuous liner { *Yes* }
 as fitted *10 1/4"* as fitted { screw }

Bronze Liners, thickness in way of bushes *601* as per Rule *601* Thickness between bushes *4.5"* as per Rule *4.5"* Is the after end of the liner made watertight in the propeller boss *Yes* as fitted *21/32"* as fitted *11/32"*

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 *do*

If two liners are fitted, is the shaft lapped or protected between the liners *do* Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft *do* Length of Bearing in Stern Bush next to and supporting propeller *4 1/2"*

Propeller, dia. *11'-9"* Pitch *12'-0"* No. of Blades *4* Material *C.I.* whether Moveable *do* Total Developed Surface *52* sq. feet

Feed Pumps worked from the Main Engines, No. *2* Diameter *3"* Stroke *18"* Can one be overhauled while the other is at work *Yes*

Bilge Pumps worked from the Main Engines, No. *2* Diameter *3"* Stroke *18"* Can one be overhauled while the other is at work *Yes*

Feed Pumps { No. and size *One 7 1/2" x 5" x 6" Duplex* Pumps connected to the { No. and size *2-3" x 18"* { *One 7 1/2" x 8"* } *5" steam* } *Hand pump to*
 How driven *Independent steam* Main Bilge Line How driven *Main Engine* { *Hand steam* } *Electric* } *oil gutter ways*

Ballast Pumps, No. and size *One 4" x 7" x 8"* 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 1/4" dia, 3" steam ejector, 7 4-1 1/2" suction in oil gutter ways*

In Pump Room *Copied one @ 2" dia* In Holds, &c. *One to each of the following @ 2" dia*
Fore & Aft peaks, late ballast post & staid

Main Water Circulating Pump Direct Bilge Suctions, No. and size *6"* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *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 *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 *None* How are they protected *do*

What pipes pass through the deep tanks *None* Have they been tested as per Rule *do*

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 *do* worked from *do*

MAIN BOILERS, &c.—(Letter for record *S.*) Total Heating Surface of Boilers *3550 sq. ft.*

Which Boilers are fitted with Forced Draft *All* Which Boilers are fitted with Superheaters *None*

No. and Description of Boilers *One S.B.* Working Pressure *210 lbs/10'*

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

IS A DONKEY BOILER FITTED? *do* If so, is a report now forwarded? *do*

Can the donkey boiler be used for domestic purposes only *do*

PLANS. Are approved plans forwarded herewith for Shafting *10/1/40* Main Boilers *20/10/39* Auxiliary Boilers *do* Donkey Boilers *do*
 (If not state date of approval)

Superheaters *do* General Pumping Arrangements *13/3/40* Oil fuel Burning Piping Arrangements *26/4/40*

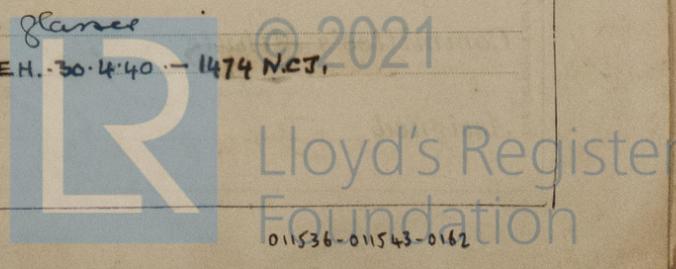
SPARE GEAR.

Has the spare gear required by the Rules been supplied *Spare gear as per Specification approved by Admiralty*

State the principal additional spare gear supplied

<i>2 top end bolts & nuts</i>	<i>25 Condenser tubes - 50 feet each</i>	<i>Oil fuel burning insulation</i>
<i>2 ball valves</i>	<i>1 set of rings & springs for each</i>	<i>6 boiler bodies</i>
<i>2 main bearings</i>	<i>Cylinders or piston valves</i>	<i>6 " caps</i>
<i>1 set of coupling bolts</i>	<i>1 propeller</i>	<i>36 " nutbolts</i>
<i>1 set of feed & bilge pump valves</i>	<i>1 propeller shaft</i>	<i>36 " diaphragms</i>
<i>1 set of air pump valves</i>	<i>12 boiler tubes, plain</i>	<i>6 fine neck quarls</i>
<i>1 man check valve</i>	<i>4 " " staps</i>	<i>2 thermometers</i>
<i>1 double " "</i>	<i>1 piston rod</i>	<i>12 gauge glasses</i>
<i>2 safety valve springs</i>	<i>1 valve spindle</i>	<i>Spare Se shaft marked 49.E.H.-30.4.40-1474 N.C.T.</i>

The foregoing is a correct description.
 FOR CHARLES D. HOLMES & CO., LTD,
C. D. Holmes Manufacturer.



1939 Dec. 9. 21. 1940 Jan. 5. 18. 31. Feb. 9. Mar. 7. Apr. 24. 25. May 8. 9. 24. 27. 29. June 6. 11. 13. 17. 20. 21. 28.
 July 4. 22. 29. 30. Aug. 2. 13. 28. Sep. 4. 7. 27. 30. Oct. 2. 8. 11. 25. 26. 30. Nov. 1. 11. 12.
 1940 June 13. July 29. 31. Aug. 6. Oct. 5. 16. 22. 25. 28. Nov. 4. 16. 18. 19. 22

Dates of Survey while building
 During progress of work in shops - - -
 During erection on board vessel - - -
 Total No. of visits 53.

Dates of Examination of principal parts—Cylinders 4.7.40 + 15.7.40 Slides 28.6.40 Covers 4.7.40 + 15.7.40
 Pistons 28.6.40 Piston Rods 28.6.40 Connecting rods 28.6.40
 Crank shaft 28.8.40 Thrust shaft 24.5.40 Intermediate shafts 4.7.40
 Tube shaft ✓ Screw shaft 29.5.40 Propeller 29.7.40
 Stern tube 13.6.40 Engine and boiler seatings 29.7.40 Engines holding down bolts 16.10.40
 Completion of fitting sea connections 29.7.40
 Completion of pumping arrangements 12.11.40 Boilers fixed 16.10.40 Engines tried under steam 19.11.40
 Main boiler safety valves adjusted 12.11.40 Thickness of adjusting washers 3/8" 1/32"
 Crank shaft material Steel Identification Mark 783 EH 30.4.40 Thrust shaft material Steel Identification Mark 825 EH 6.2.40
 Intermediate shafts, material Steel Identification Marks 900 EH 19.2.40 Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material Steel Identification Mark 736 EH. Steam Pipes, material Steel Test pressure 630 lb/sq. Date of Test 28/10/40
 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 No. ✓
 Is this machinery duplicate of a previous case Yes. ✓ If so, state name of vessel ASSURANCE.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The Machinery of the vessel has been fitted on board under Special Survey in accordance with the approved plans, the Rules, & the Specification. The workmanship & materials are good & when tried under full working conditions the contract power, viz:- 1350 HP @ 122 R.P.M. was easily obtained & it was satisfactory in every respect.

It is eligible, in my opinion, to have the record of L.M.C. 11.40. C.L. & the notation T. 3 Cy. 17" 28" 46" x 33", 210 lb, 222 HP. 1. SB. 3 Cf H.S 3530. F.O.

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

The amount of Entry Fee ... £ : :
 Special ... (£120) £120 : 0 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 3 DEC 1940
 When received, 23-12-1940

D. J. G. Williams
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE: 10 DEC 1940
 Assigned J. Lamb 11.40
 J. D. C.