

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office FEB-2-1938

Date of writing Report 19 When handed in at Local Office 11/2/1938 Port of NEWCASTLE-ON-TYNE

No. in Survey held at *Wallsend* Date, First Survey *16 June* Last Survey *27 Jan 1938*
Reg. Book. on the *SS "BRATED"* (Number of Visits *43*)

Built at *Buraticland* By whom built *Buraticland Shipbuilding Co. Ltd.* Yard No. *217* When built *1938*
Engines made at *Wallsend* By whom made *North Eastern Marine Eng Co.* Engine No. *2884* When made *1938*
Boilers made at *Wallsend* By whom made *North Eastern Marine Eng Co.* Boiler No. *2884* When made *1938*
Registered Horse Power Owners *Hudson S. S. Co. Ltd.* Port belonging to *London*
Nom. Horse Power as per Rule *115* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *Yes*
Trade for which Vessel is intended

ENGINES, &c.—Description of Engines *Triple Expansion* Revs. per minute *98/100*
Dia. of Cylinders *18 1/2" x 23" x 38"* Length of Stroke *27"* No. of Cylinders *3* No. of Cranks *3*
Crank shaft, dia. of journals *as per Rule 7.75"* Crank pin dia. *7 7/8"* Crank webs *18 1/2"* Thickness parallel to axis *4 1/8"*
Intermediate Shafts, diameter *as per Rule 7.38"* Thrust shaft, diameter at collar *as per Rule 7.75"*
Tube Shafts, diameter *as per Rule 8.29"* Screw Shaft, diameter *as per Rule 8 5/8"* Is the *hub* shaft fitted with a continuous liner *Yes*
Bronze Liners, thickness in way of bushes *as per Rule 9/16 Bore* Thickness between bushes *as per Rule 1 3/32 Bore* 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 *In 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 *fits full length*
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 *no*
Propeller, dia. *11-0"* Pitch *11-12 Various* No. of Blades *4* Material *Brongze* whether Movable *no* Total Developed Surface *38"* sq. feet
Feed Pumps worked from the Main Engines, No. *2* Diameter *2 1/4"* Stroke *15"* Can one be overhauled while the other is at work *Yes*
Bilge Pumps worked from the Main Engines, No. *2* Diameter *2 1/4"* Stroke *15"* Can one be overhauled while the other is at work *Yes*
Feed Pumps { No. and size *1 - 7 x 4 1/2 x 8"* Pumps connected to the { No. and size *One - 9 x 11 x 10"*
How driven *Steam* Main Bilge Line { How driven *Steam*
Ballast Pumps, No. and size *One 9 x 11 x 10"* Lubricating Oil Pumps, including Spare Pump, No. and size *—*
Are two independent means arranged for circulating water through the Oil Cooler *—* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room *1-2 1/2" aft + 2 @ 2 1/2"*
In Pump Room *—* In Holds, &c. *Nº1 - 2 @ 2 1/2" Nº2 - 2 @ 3"*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *1-4"* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *One 6"*
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 *Both*
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 *—*
What pipes pass through the deep tanks *—* 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 *no tunnel* Is it fitted with a watertight door *—* worked from *—*

MAIN BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers *2067 sq ft*
Is Forced Draft fitted *No* No. and Description of Boilers *1. Single ended, multitubular* Working Pressure *220 lbs*
IS A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes*
IS A DONKEY BOILER FITTED? *no* If so, is a report now forwarded? *—*
Is the donkey boiler intended to be used for domestic purposes only *no*
PLANS. Are approved plans forwarded herewith for Shafting *no* Main Boilers *Yes* Auxiliary Boilers *—* Donkey Boilers *—*
Superheaters *—* General Pumping Arrangements *—* 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 *2 pair top end braces, 1 pair of bottom end braces, 1 set of pads for thrust shaft, 1 set each of HP piston rings & piston valve rings, spare coach springs for L.P. piston; spares for donkey pumps.*

The foregoing is a correct description,

Manufacturer.

013260-013267-0137



Dates of Survey while building
 During progress of work in shops -- { 1937 June 16, 28, July 2, 5, Sep. 7, 20, 23, 27, 29, Oct. 12, 14, 28, Nov. 1, 3, 4, 5, 8, 10, 15
 16, 17, 18, 19, 22, 23, 24, 26, Dec. 1, 6, 8, 9, 13, 30. 1938 Jan. 4, 5, 6, 10, 11, 14, 19, 21, 26.
 During erection on board vessel --- 43.
 Total No. of visits

Dates of Examination of principal parts—Cylinders 8-11-37 Slides 6-12-37 Covers 8-11-37
 Pistons 6-12-37 Piston Rods 6-12-37 Connecting rods 29-9-37
 Crank shaft 12-10-37 Thrust shaft 5-7-37 Intermediate shafts —
 Tube shaft — Screw shaft 27-11-37 Propeller 1-11-37
 Stern tube 26-11-37 Engine and boiler seatings 4-1-38 Engines holding down bolts 11-1-38
 Completion of fitting sea connections 15-12-37
 Completion of pumping arrangements 26-1-38 Boilers fixed 11-1-38 Engines tried under steam 19-1-38
 Main boiler safety valves adjusted 19-1-38 Thickness of adjusting washers P 5/16" S. 3/8"
 Crank shaft material Steel Identification Mark 12-10-37 J.E.S. Thrust shaft material Steel Identification Mark 5-7-37 W.N.
 Intermediate shafts, material — Identification Marks — Tube shaft, material — Identification Mark —
 Screw shaft, material Steel Identification Mark 24-11-37 Steam Pipes, material S.D. Steel Test pressure 660 lbs Date of Test 14-1-38
 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 "Upminster" Report No 91919

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built under Special Survey, in accordance with the Rules and approved plans. The workmanship and materials are good. It has been fitted on board in an efficient manner, tried under working conditions and found satisfactory and is eligible in my opinion to be classed with record of + L.M.C 1-38. T.S. CL. ✓

The amount of Entry Fee ... £ 3 : 0 :
 Special ... £ 28 : 15 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 FEB 1938
 4/1/38

J. Seller
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned + Linc 1.38
 Ch. via long 1SB 220lb



NEWCASTLE-on-TYNE

Certificate to be sent to

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