

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office - 4 DEC 1948

Date of writing Report 2-12-1948 When handed in at Local Office 2-12-1948 Port of WEST HARTLEPOOL

No. in Survey held at WEST HARTLEPOOL Date, First Survey 18<sup>th</sup> November, 1947, Last Survey 12<sup>th</sup> November, 1948  
Reg. Book (Number of Visits 106)

on the STEEL SCREW "AVONDENE" Tons { Gross 4952.77  
Net 2928.22

Built at WEST HARTLEPOOL By whom built W<sup>m</sup> GRAY, CO LTD Yard No. 1220 When built 1948

Engines made at WEST HARTLEPOOL By whom made CENTRAL MAR. ENG. WKS. Engine No. 1220 When made 1948

Boilers made at WEST HARTLEPOOL By whom made CENTRAL MAR. ENG. WKS. Boiler No. 1220 When made 1948

Registered Horse Power Owners THE DENE SHIPPING CO LTD Port belonging to LONDON

Nom. Horse Power as per Rule 550 = MN Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

Trade for which vessel is intended OCEAN GOING

ENGINES, &c.—Description of Engines TRIPLE EXPANSION Revs. per minute 67

Dia. of Cylinders 23-36-65 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 13.5 as fitted 13 3/4 Crank pin dia. 13 3/4 Crank webs Mid. length breadth 19 3/4 Mid. length thickness 8 1/2 Thickness parallel to axis 8 1/2 Thickness around eye-hole 6

Intermediate Shafts, diameter as per Rule 12.85 as fitted 13 1/8 Thrust shaft, diameter at collars as per Rule 13.5 as fitted 13 3/4

Tube Shafts, diameter as per Rule - as fitted - Screw Shaft, diameter as per Rule 14.39 as fitted 14 7/8 Is the shaft fitted with a continuous liner { screw } yes

Bronze Liners, thickness in way of bushes as per Rule 738 as fitted 3/4 Thickness between bushes as per Rule 553 as fitted 9/16 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 -

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

at NO If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia. 18'-6" Pitch 16'-6" No. of Blades 4 Material Bronze whether Moveable NO Total Developed Surface 110 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3 1/2 Stroke 28 Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 Stroke 28 Can one be overhauled while the other is at work yes

Feed Pumps { No. and size 3 at 9 1/2 x 7 x 18 Simplex Pumps connected to the Main Bilge Line { No. and size 1 at 9 x 11 x 10, 1 at 7 x 8 1/2 x 8, 2 at 4 x 28 How driven Steam Steam M. Eng. Sinks

Ballast Pumps, No. and size 1 at 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 3 at 3", (1 at 5") (4 at 2" to Cofferdams PIS + Dry Bilg PIS to Transfer pumps.)

In Pump Room In Holds, &c. No. 1-2 at 3", No. 2-2 at 3 1/2", Deep 2 at 2 1/2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 at 8" Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size 1 at 5" 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 + on reservoirs Are they fitted with Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the hatch plates yes Are the Overboard Discharges above or below the deep water line main - below Remainder - 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 Forward bilge suction 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 yes worked from Upper deck level.

MAIN BOILERS, &c.—(Letter for record 3) Total Heating Surface of Boilers 6032 sq. ft. Superheaters 2552 sq. ft. Total = 8584

Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters Both

No. and Description of Boilers Two single ended multitubular Working Pressure 225 lbs p.s.i.

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 yes Main Boilers yes Auxiliary Boilers - Donkey Boilers -

(If not state date of approval)

Superheaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes

State the principal additional spare gear supplied Tail shaft.

The foregoing is a correct description.  
FOR THE CENTRAL MARINE ENGINE WORKS,  
(In Care of Lloyd's Register)

John H. Seames  
GENERAL MANAGER

Manufacturer.



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Lloyd's Register  
Foundation

011678-011692-0013

Dates of Survey while building

During progress of work in shops - - { 1947 Nov. 18-19-26-28-1948 Jan. 14 Feb. 13-14-17-24-25-26-27 March 1-2-3-9-10-12-17-18-19-22-23-24-31 April 5-7-8-13-14-15-19-21-22-27-28-29 May 3-5-7-11-13-14-19-20-21-25-26-27-28-31 June 1-2-4-10-11-14-15-17-18-21-24-25-29 July 1-2-5-7-14-23-27 Aug. 31 Sept. 2-8-9-13-14-27-28-29 Oct. 4-5-11-12-13-14-15-18-19-20-24-25-26-27-28-29-30 Nov. 1-3-4-5-9-10-11-12

During erection on board vessel - - - {

Total No. of visits 106

Dates of Examination of principal parts—Cylinders 26-11-47, 14-1-48, 27-2-48, 17-3-48 Slides 23-3-48 Covers 27-2-48, 17-3-48  
 Pistons 5-5-48 Piston Rods 19-3-48 Connecting rods 3-3-48  
 Crank shaft 2-3-48, 24-3-48, 25-5-48 Thrust shaft 25-2-48, 24-3-48 Intermediate shafts 14/21, 4-48, 25-5-48  
 Tube shaft — Screw shaft 21-3-48, 25-5-48, 2-6-48 Propeller 2-6-48  
 Stern tube 31-5-48, 1-6-48 Engine and boiler seatings 10-6-48 Engines holding down bolts 23-8-48  
 Completion of fitting sea connections 23-4-48  
 Completion of pumping arrangements 11-11-48 Boilers fixed 29-6-48 Engines tried under steam 29-10-48, 5-11-48  
 Main boiler safety valves adjusted 29-10-48 Thickness of adjusting washers S.B/r. PV. 7/16 SV 23/64 Spt. 7/32 P.B/r. PV. 9/32 SV 9/32 Spt. 7/32  
 Crank shaft material S.M. Steel Identification Mark 495 CP. Thrust shaft material S.M. Steel Identification Mark 530 CP.  
 Intermediate shafts, material S.M. Steel Identification Marks 531-2-3-4-5-6-7. CP. Tube shaft, material — Identification Mark —  
 Screw shaft, material S.M. Steel Identification Mark 528 CP. Steam Pipes, material Steel Test pressure 675 lbs p.d. Date of Test 28-5-48, 5-7-48, 23-7-48, 29-27-29-9-48, 27-10-48  
 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 MARDENE Hpl Report No 18832

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been built under Special Survey in accordance with approved plans, Secretary's letters and the Rules of the Society. The materials and workmanship are good. It has been securely fitted on board, tried under steam alongside and under full working conditions at sea and found satisfactory. This machinery is, in my opinion eligible for notation + L.M.C 11 - 48, 2 S.B (Spt) 225 lbs p.d. W.P. F.D. TS (CL). Fitted to burn Oil Fuel 11 - 48, Flash Point above 150°F.

The amount of Entry Fee	£	:	:	When applied for,
Special	£	185	-	3-12-1948
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

*John Findlay*  
 Engineer Surveyor to Lloyd's Register of Shipping.

THURS 23 DEC 1948

Committee's Minute

Assigned + LMC 11, 48

FITTED FOR OIL FUEL 11, 48 FLASH POINT ABOVE 150°F. F.D. C.L. 2 SB 225 lb Spt.



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