

REPORT ON OIL ENGINE MACHINERY.

Received at London Office 26 SEP 1951

Writing Report 3rd Sept 1951 When handed in at Local Office 3rd Sept 1951 Port of BRISTOL.

Survey held at Sharpness Date, First Survey 25th January, 49 Last Survey 29th August, 1951

Book. ~~Sinker~~ on the Twin ~~Deck~~ Screw vessel "CHRISTINA DAWN" ex LCG(M) 120 Tons Gross 312.55 Net

at London By whom built Gen. Steam Nav. Co., Ltd. Yard No. When built 1945

es made at Colchester By whom made Davey Paxman & Co., Ltd. Engine No. P 80860 S 80853 When made 1944

Boilers made at - By whom made - Boiler No. When made -

Horse Power 380 Owners I. P. Langford (Shipping) Ltd. Port belonging to Gloucester

Power as per Rule 115 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

for which vessel is intended For service U.K. Eire (excluding West Coast) Channel Islands & Continent between River Elbe & Brest.

ENGINES, etc. - Type of Engines 2 sets Paxman Ricardo 60° V Type 2 or 4 stroke cycle 4 Single or double acting single

um pressure in cylinders 800lbs Diameter of cylinders 7" Length of stroke 7 3/4" No. of cylinders 12 each No. of cranks 6 each set

Indicated Pressure 73 lbs. Ahead Firing Order in Cylinders - Span of bearings, adjacent to the crank, measured

inner edge to inner edge 7.1 inches Is there a bearing between each crank Yes Revolutions per minute 1100

Wheel dia. 23" Weight 442lbs Moment of inertia of flywheel (lbs. in² or Kg.cm.²) - Means of ignition compression of fuel used diesel

Solid forged dia. of journals as per Rule 4 1/2" Crank pin dia. 4 1/8" Crank webs Mid. length breadth 7" Thickness parallel to axis - oil

Wheel dia. as per Rule on coupling Intermediate Shafts, diameter as fitted 3 3/4" Thrust Shaft, diameter at collars as fitted 4 1/2"

Shaft, diameter as fitted - Screw Shaft, diameter as fitted 3 5/8" Is the screw shaft fitted with a continuous liner No

Liners, thickness in way of bushes as per Rule Thickness between bushes as fitted - Is the after end of the liner made watertight in the

her boss No If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -

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-

ive - 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

tube shaft No If so, state type - Length of bearing in Stern Bush next to and supporting propeller 15 1/2"

ellers dia. 36" Pitch 22" No. of blades 3 Material Bronze whether moveable No Total developed surface 3.75 sq. feet

nt of inertia of propeller (lbs. in² or Kg.cm.²) - Kind of damper, if fitted None

od of reversing Engines gears Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of

ation Forced Thickness of cylinder liners 3/16" Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled

ged with non-conducting material Both If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

o the engine up Cooling Water Pumps, No. ONE AT EACH ENGINE. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Pumps worked from the Main Engines, No. none Diameter - Stroke - Can one be overhauled while the other is at work -

s connected to the Main Bilge Line (No. and size 2 one Worthington Simpson 70 tons hr. One Mono type AD12 30 tons hr. How driven electric motor auxiliary diesel

ooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

ements - - - - -

t Pumps, No. and size 1 - 70 tons hr. Power Driven Lubricating Oil Pumps, including spare pump, No. and size ONE AT EACH ENGINE GEAR PUMP

vo independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary

pumps, No. and size: - In machinery spaces 2 at 3 1/2" dia. 1 at 3" dia. In pump room -

ds, &c. Forward hold 2 at 2 1/4" dia. After hold 2 at 2 1/4" dia. Steering gear flat - hand pump.

endent Power Pump Direct Suctions to the engine room bilges, No. and size 2 at 3 1/2" dia. 1 at 3" dia.

ll the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily

reible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes, Admiralty type lifting strum boxes

l Sea Connections fitted direct on the skin of the Ship Yes Are they fitted with valves or cocks valves Are they fixed

ently high on the ship's side to be seen without lifting the platform plates Yes Are the overboard discharges above or below the deep water line above

ey 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 - -

pipes pass through the bunkers none How are they protected -

pipes pass through the deep tanks none Have they been tested as per Rule -

l pipes, cocks, valves and pumps in connection with the machinery 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

, or from one compartment to another Yes Is the shaft tunnel watertight none Is it fitted with a watertight door - worked from -

ood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -

Air Compressors, No. none - electric No. of stages diameters stroke driven by

ary Air Compressors, No. none No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. none No. of stages diameters stroke driven by

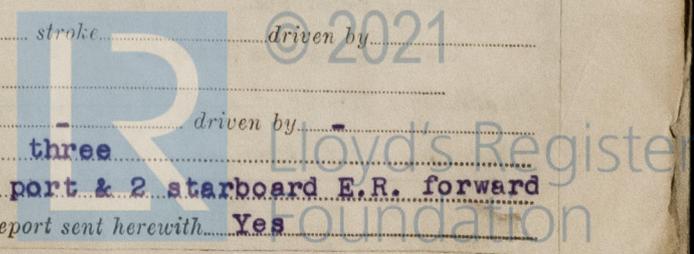
provision is made for first charging the air receivers - -

nging Air Pumps, No. none diameter stroke driven by

ary Engines crank shafts, diameter as per Rule three as fitted 3 1/2" Position 1 port & 2 starboard E.R. forward

the auxiliary engines been constructed under special survey No Is a report sent herewith Yes

1015224-015232-0354



AIR RECEIVERS:—Have they been made under survey... **none** ✓ State No. of report or certificate... - -
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule... - -
 Can the internal surfaces of the receivers be examined and cleaned... - - Is a drain fitted at the lowest part of each receiver... - -
Injection Air Receivers, No. **None** ✓ Cubic capacity of each... - - Internal diameter... - - thickness... - -
 Seamless, welded or riveted longitudinal joint... - - Material... - - Range of tensile strength... - - Working pressure... by Rules...
Starting Air Receivers, No. **none** ✓ Total cubic capacity... - - Internal diameter... - - thickness... - -
 Seamless, welded or riveted longitudinal joint... - - Material... - - Range of tensile strength... - - Working pressure... by Rules...
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... - -

PLANS. Are approved plans forwarded herewith for shafting... **No** (If not, state date of approval) Receivers... - - Separate fuel tank...
 Donkey boilers... - - General pumping arrangements... **Yes** Pumping arrangements in machinery space... **Yes**
 Oil fuel burning arrangements... - -
 Have Torsional Vibration characteristics been approved... - - Date of approval... - -

SPARE GEAR.

Has the spare gear required by the Rules been supplied... **Yes** ✓
 State the principal additional spare gear supplied... - -

The foregoing is a correct description.

Manufacturers.

Dates of Survey while building	During progress of work in shops - -	Engines built under Admiralty Supervision
	During erection on board vessel - -	Engines installed under Admiralty Supervision
	Total No. of visits	

Dates of examination of principal parts—Cylinders **14.4.50** Covers **14.4.50** Pistons **14.4.50** Rods - - Connecting rods **14.4.50**
 Crank shaft **14.4.50** Flywheel shaft - - Thrust shaft **14.4.50** Intermediate shafts **14.4.50** Tube shaft - -
 Screw shaft **30.8.50** Propeller **30.8.50** Stern tube **30.8.50** Engine seatings - - Engine holding down bolts - -
 Completion of fitting sea connections... - - Completion of pumping arrangements **29.8.51** Engines tried under working conditions **9.8.51**
 Crank shaft, material... - - Identification mark... - - Flywheel shaft, material... - - Identification mark... - -
 Thrust shaft, material... - - Identification mark... - - Intermediate shafts, material... - - Identification marks... - -
 Tube shaft, material... - - Identification mark... - - Screw shaft, material... - - Identification mark... - -
 Identification marks on air receivers... - -
 Welded receivers, state Makers' Name... - -
 Is the flash point of the oil to be used over 150°F... **Yes** ✓
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with... **Yes (see approved plans)** ✓
 Description of fire extinguishing apparatus fitted **2 - 2 gal portable foam extinguishers in E.R. Pyrene. Fire hoses connections in E.R.**
 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... **No** ✓ If so, state name of vessel... - -

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

The **main Engines** of this vessel were built to Admiralty specification and survey during 1944 and have been subsequently used.
 The Machinery has now been opened out, working parts examined and found to be in good and new condition. Scantlings and sizes checked and found to be in accordance with this report. The scantlings of shafting for this type of engine have been previously submitted and approved.
 A survey in accordance with the Rule requirements for LMC now carried out during conversion of vessel to Coaster Type and alterations to the installation made in accordance with the approved Rules and amendments.
 Manoeuvring of engines tried out and found satisfactory.

The amount of Entry Fee ...	£	22.00	When applied for	19
Special ...	£		When received	19
Donkey Boiler Fee...	£			
Travelling Expenses (if any) £				

Approved by **J.W. Borten** and **...**
 Engineer Surveyor to Lloyd's Register of Shipping



Lloyd's Register Foundation

Committee's Minute **TUES. 6 NOV 1951**
 Assigned **LMC 8.51.111 Eng.**
Both S 8.50 (with endorsement)

Certificate (if required) to be sent to the Surveyors on or below the space for Committee's Minute.