

REPORT ON OIL ENGINE MACHINERY.

No. 49856

Report 4.2.1953 When handed in at Local Office 4.2.1953 Port of GLASGOW Received at London Office 17 FEB 1953
Place of survey held at GLASGOW Date, First Survey 6.7.51 GLASGOW Last Survey 21st January 1953
Number of Visits

Single Screw vessel "CLYDEFIELD"
Glasgow By whom built Messrs Harland & Wolff Ltd. Yard No. 601436 When built 1953
Glasgow By whom made Do. Engine No. 60.1436 When made 1953
Made at Belfast By whom made Do. Boiler No. 1505/6 When made 1953
Maximum 7500 Owners Messrs Harland & Wolff Ltd. Port belonging to Newcastle
Service Old M.N. (340 New M.N. 1500) Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Vessel is intended Oil tanker

Type of Engines Opposed piston Airless injection 2 or 4 stroke cycle 2 Single or double acting Single
in cylinders 700 dia. Diameter of cylinders 750 mm Length of stroke 1500 + 500 No. of cylinders 6 No. of cranks 6
Pressure 6.67 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in
mm 492 mm Is there a bearing between each crank Yes Revolutions per minute { Maximum 120 Service

Weight 7550 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 26050 kg cm² Means of ignition Compression Kind of fuel used Diesel oil
dia. of journals as per Rule As app. Crank pin dia. 575 mm Crank webs Mid. length breadth 1200 mm Thickness parallel to axis
as fitted 575 mm Crank webs Mid. length thickness 290 mm shrunk Thickness around eye hole 298 mm
Intermediate Shafts, diameter as per Rule As app. Thrust Shaft, diameter at collars as per Rule As app.
as fitted 19 mm as fitted 575 mm
Screw Shaft, diameter as per Rule As app. Is the screw shaft fitted with a continuous liner Yes
as fitted 24 mm

Thickness in way of bushes as per Rule As app. Thickness between bushes as per Rule As app. Is the after end of the liner made watertight in the
as fitted 1 1/8" as fitted 7/8"
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length
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-
two liners are fitted, is the shaft lapped or protected between the liners. Is an approved Oil Gland fitted at the after
If so, state type. Length of bearing in Stern Bush next to and supporting propeller 2' 11"

g Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of
Thickness of cylinder liners 5/16" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled
conducting material Lapped. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
Jurnal exhaust Cooling Water Pumps, No. and how driven 2 Steam driven Working F.W. 2
are F.W. One S.W. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
from the Main Engines, No. and capacity None Can one be overhauled while the other is at work
the Main Bilge Line (No. and capacity of each) 1 Bilge + Sea Service (100 T/Hr) Sea Service (150 T/Hr) Ballast (300 T/Hr)
How driven Steam
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

nd capacity 1 (300 T/Hr) Power Driven Lubricating Oil Pumps, including spare pump, No. and size 3 14" x 12 1/2" = 24"
means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions 3
achinery spaces 3 4" Bone + 2 - 2 1/2" Oil gutterway fore end. In pump room 20 1/4" x 10 2 1/2"
ken.

s to the engine room bilges, No. and size 3 - 6" Bone (2 Port - 1 Starb.)
on pipes in holds and bilges fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily
placed above the level of the working floor, with straight tail pipes to the bilges. Yes
ms fitted direct on the skin of the Ship. Steel Are they fitted with valves or cocks. Valves Are they fixed
e ship's side to be seen without lifting the platform plates. Yes Are the overboard discharges above or below the deep water line. Above
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
ugh the bunkers. 4" Cofferdam suction How are they protected. Pipe thickness increases

through the deep tanks. None Have they been tested as per Rule. Yes
cks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times. Yes
ent 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
me compartment to another. Yes Is the shaft tunnel watertight. Yes. Is it fitted with a watertight door. worked from.
what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork. Yes
ressors, No. Two No. of stages. Two diameters 280 x 245 mm stroke 130 mm driven by Steam
ompressors, No. One "Distar" type No. of stages. Two diameters stroke driven by Diesel Eng. 6500 ft.
Air Compressors, No. No. of stages. diameters stroke driven by 2020

s made for first charging the air receivers. Emergency air compressor. Driven by oil engine. Hand starting
Pumps or Blowers, No. Two How driven. Roller Chain from crankshaft of Main engine
Have they been made under survey. Yes Engine Nos. 10854/5 44 AL III
Makers name. Two generators British Thomson Houston Position of each in engine room Starb. Sid.
One gas generator Compton Parkinson Report No. C4774

AIR RECEIVERS:—Have they been made under survey *Yes*. State No. of report or certificate *X 478/1*
 State full details of safety devices *Safety valves fitted on air supply line also on each receiver*
 Can the internal surfaces of the receivers be examined and cleaned *Yes*. Is a drain fitted at the lowest part of each receiver *Yes*
 Injection Air Receivers, No. *None* Cubic capacity of each *1100* Internal diameter *10 1/2"* thickness *1/2"*
 Seamless, welded or riveted longitudinal joint *Yes* Material *Steel* Range of tensile strength *29/33T* Working pressure *150*
 Starting Air Receivers, No. *Two* Total cubic capacity *2 x 540 = 1080* Internal diameter *5' 11 3/4"* thickness *1 3/32"*
 Seamless, welded or riveted longitudinal joint *Welded* Material *Steel* Range of tensile strength *29/33T* Working pressure *150*

DONKEY BOILERS FITTED *Yes*. If so, is a report now forwarded *Yes*
 Is the donkey boiler intended to be used for domestic purposes only *No*
PLANS. Are approved plans forwarded herewith for shafting *Yes* Receivers *Yes* Separate *Yes*
 (If not, state date of approval)
 Donkey boilers *Yes* General pumping arrangements *Yes* Pumping arrangements in machinery space *Yes*
 Oil fuel burning arrangements *Yes*
 Have Torsional Vibration characteristics been approved *Yes* Date and particulars of approval *29th July 1952*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* State if for "short voyages" only *No*
 State the principal additional spare gear supplied *None. Rule requirements only supplied*

The foregoing is a correct description,
 For *HARLAND AND WOLFF LIMITED* Manufacturer.

Wm. J. Wright
 Dates of Survey while building
 During progress of work in shops: 1951 July 6, Nov. 22 (1952) Feb. 8, 19, 20, 21, Mar. 27, Apr. 15, 29, 30, May 7, 8, 9, 14, 19, 20, 21, 22, 26, 27, 28, June 26, 27, July 4, 7, 8, 9, 10, 28, 30, 31, Aug. 1, 4, 11, 13, 14, 18, 27, Sep. 11, 14.
 During erection on board vessel: Sep. 17, 18, 19, 22, 24, 26, Oct. 3, 7, 8, 9, 10, 14, 21, 22, 23, 24, 27, 28, 29, 31, Nov. 4, 5, 7, 12, 13, 14, 17, 18, 19, 20, 28, 9, 10, 12, 15, 17, 18, 19, 22, 23, 24, 26, 29, 30, (1953) Jan. 7, 9, 12, 13, 15, 16, 21.
 Total No. of visits *103*

Dates of examination of principal parts—Cylinders *21st Oct. 1952* Covers *21st Oct. 52* Pistons *21 Oct. 1952* Rods *21 Oct. 1952* Connecting
 Crank shaft *30/4/52* Flywheel shaft *24/11/52* Thrust shaft *24/11/52* Intermediate shafts *24/11/52* Tube shaft
 Screw shaft *9/10/52* Propeller *9/10/52* Stern tube *4/8/52* Engine seatings *24/11/52* Engine holding down bolts
 Completion of fitting sea connections *4/8/52* Completion of pumping arrangements *30/12/52* Engines tried under working conditions

Crank shaft, material *O.H. Steel* Identification mark *JH36 30/4/52* Flywheel shaft, material *✓* Identification mark *D.R.*
 Thrust shaft, material *O.H. Steel* Identification mark *S.173H GS.23/11/52* Intermediate shafts, material *O.H. Steel* Identification mark
 Tube shaft, material *✓* Identification mark *✓* Screw shaft, material *O.H. Steel* Identification mark
 Identification marks on air receivers *LLOYDS Nos. 565, 566 Lloyd's 584 10" W.P. 356 10" J.B.S. 26/8/52 116525*
584 10" W.P. 356 10" J.B.S. 1/10/52

Welded receivers, state Makers' Name *Harland & Wolff Ltd Belfast*
 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*
 Full description of fire extinguishing apparatus fitted in machinery spaces *2-10 GALL. FOAM. 10. 2-2 1/2" BORE NOSE VALVES. 4-30" BORE NOSE VALVE 2-30" 2 1/2" BORE NOSE 1-SOFT SPRAY NOZZLE.*
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *Later* If so, have the requirements of the Rules been complied with
 What is the special notation desired *L.M.C. None*
 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, Speed restrictions, & *The Machinery has been*
Special Survey in accordance with the Rules of the Society, Approved No
Lets the Materials & Workmanship are good. On completion the engine
on the Builders test bed under full power & found satisfactory.
The Machinery has now been securely fitted on board the vessel, full
have been carried out & varied loads including full power & found
A temporary notice board has been fitted at the control station stating that
operated continuously between 65-77 R.P.M. & the engine tachometer has been read
This machinery is in my opinion eligible to be classed in the Register Book with the
have the Motor of T.S.C. 2 D.B. 180 lb. Oil Engine with torsional endorsement.

The amount of Entry Fee *20% Older* £ 41 4
80% Newer £ 208 0
 Special Installation £ 145 0
 Donkey Boiler Fee... £
 Travelling Expenses (if any) £
 When applied for *10 FEB 1953*
 When received *19*

Assigned *+ L.M.C. 1,53 Oil Engine with torsional endorsement 2 DB - 180 lb.*
 Committee's Minute
 Glasgow 10 FEB 1953
 Engineer Surveyor to Lloyd's Register
 Lloyd's Register Foundation

8.7.52
 4/2/53
 13.2.53

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