

REPORT ON OIL ENGINE MACHINERY.

No. 20274
15 SEP 1954

Received at London Office

MIDDLESBROUGH.

Port 3rd Sept 1954. When handed in at Local Office 14th Sept 1954 Port of MIDDLESBROUGH.
held at Haverton Hill & Hartlepool. Date, First Survey 14th December 1953 Last Survey 26th August, 1954.
Number of Visits 112

Single Double Screw vessel m.v. "CYGNUS". Tons Gross 10608. Net 6168.
Haverton Hill on Tees. By whom built Furness Shipbuilding Co. Ltd., Yard No. 463. When built 1954.
Hartlepool. By whom made Richardson Westgarth (Hpl) Ltd. Engine No. 3242. When made 1954.
made at Newcastle. By whom made North Eastern Marine Eng. Co. (1938) Ltd. Boiler No. 3242. When made 1954.
ver { Maximum 5500 Owners Sociedad Transoceanica Canopus S.A. Port belonging to Monrovia.
Service 1100 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
vessel is intended Carrying petroleum in bulk.

ES, &c. — Type of Engines Opposed Piston, airless injection, 4 stroke cycle. Single or double acting Single.
ure in cylinders Opposed. Diameter of cylinders 16.5" Length of stroke 17" No. of cylinders 4. No. of cranks 2.
l Pressure 1100 Span of bearings (i.e., distance between inner edges of bearings in 1100
Is there a bearing between each crank Yes. Revolutions per minute { Maximum 1100 Service 1100
Moment of inertia of flywheel (lbs. in² or Kg. cm.²) 1100 Means of ignition Spark Kind of fuel used Heavy Oil
Weight 1100 " " " " balance wts. (" " " ") 1100

forged built dia. of journals 16.5" Crank pin dia. 16.5" Crank webs 16.5" Thrust Shaft, diameter at collars 16.5"
as per Rule 16.5" as fitted 16.5" as per Rule 16.5" as fitted 16.5"
ft, diameter 16.5" Intermediate Shafts, diameter 16.5" Thrust Shaft, diameter at collars 16.5"
as per Rule 16.5" as fitted 16.5" as per Rule 16.5" as fitted 16.5"
Screw Shaft, diameter 17" Is the { tube { screw } shaft fitted with a continuous liner { Yes. ✓
as per Rule 17" as fitted 17" as per Rule 17" as fitted 17"

s, thickness in way of bushes 13/16" Thickness between bushes 11/16" Is the after end of the liner made watertight in the Yes. ✓
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes. ✓
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-
If two liners are fitted, is the shaft lapped or protected between the liners Yes. ✓ Is an approved Oil Gland fitted at the after
tube No. 17'2" If so, state type 17'2" Length of bearing in Stern Bush next to and supporting propeller 5'8" ✓
dia. 17'2" No. of blades 4 Material Bronze whether moveable No. Total developed surface 5.19 sq. feet
ertia of propeller including entrained water (lbs. in² or Kg. cm.²) 5.19 Kind of damper, if fitted detuner.

versing Engines 1 Is a governor or other arrangement fitted to prevent racing of the engine Yes. ✓ Means of 1
Thickness of cylinder liners 1 Are the cylinders fitted with safety valves Yes. ✓ Are the exhaust pipes and silencers water cooled Yes. ✓
h non-conducting material 1 If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned Yes. ✓
engine 1 Cooling Water Pumps, No. and how driven 1-ME. 4 independent, Working F.W. 310T. chain driven. Yes. ✓
chain Spare F.W. 250 T. S.W. 410T & 330T. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes. ✓
worked from the Main Engines, No. and capacity 1-420 ton, 1 - 330 tons, 2 - 75 tons.

ected to the Main Bilge Line 1 No. and capacity of each 1-420 ton, 1 - 330 tons, 2 - 75 tons.
How driven all steam driven reciprocating pumps.
g 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
ts. 1-420 1-330 Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1-75 tons & 1-55 M.E. driven.
ps, No. and capacity 1-75. Branch Bilge Suctions 2 - 4" ✓
ependent means arranged for circulating water through the Oil Cooler Yes. ✓ In pump room 2 - 4" ✓

— In machinery spaces 2-3 1/2" 2-2 1/2" to E.R. cofferdams. ✓ In pump room 2 - 4" ✓
F & A Peaks 4" fwd. cfd. 1-2 1/2" F.P. flat 2 1/2" Hold. 2-2 1/2" sections & 2-2" ejectors. ✓ Ford. B & Ballast 2 1/2"
e Suctions to the engine room bilges, No. and size 1 - 10" 1 - 5" 1 - 3 1/2" ✓
bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes. ✓ Are the bilge suction in the machinery spaces led from easily
rud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes. ✓
Connections fitted direct on the skin of the Ship No. ✓ Are they fitted with valves or cocks valves and cocks ✓ Are they fixed
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 below ✓
uch 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. ✓

s pass through the bunkers Yes. ✓ How are they protected Yes. ✓
s pass through the deep tanks Yes. ✓ Have they been tested as per Rule Yes. ✓
oes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes. ✓
ngement 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
from one compartment to another Yes. ✓ Is the shaft tunnel watertight none ✓ Is it fitted with a watertight door worked from ✓
vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes. ✓

Compressors, No. none. No. of stages 3 diameters 33571/U 33571/V, stroke 33571/U 33571/V, driven by st. engine
Air Compressors, No. two ✓ No. of stages 3 diameters 33571/U 33571/V, stroke 33571/U 33571/V, driven by st. engine
Auxiliary Air Compressors, No. — No. of stages — diameters — stroke — driven by —
vision is made for first charging the air receivers one. ✓ How driven Main engine No. 3242 Hpl. Rpt. 19535.
ng Air Pumps one. ✓ Engine Nos. R3/48876.
Have they been made under survey Yes. ✓ Position of each in engine room Starbd. side forward fore and aft
Engines Makers name W.H. Allen, Sons & Co. Bedford. Report No. London 127900.

AIR RECEIVERS:—Have they been made under survey... Yes. ✓ State No. of report or certificate... Nwc. 0
State full details of safety devices... Relief valve on each receiver with safety discy and fusible pl
Can the internal surfaces of the receivers be examined and cleaned... Yes... 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 pressu...
Starting Air Receivers, No... Two ✓ Total cubic capacity 300 cu.ft. Internal diameter 48 1/2" ✓ thickness 1.32 ✓
Seamless, welded or riveted longitudinal joint... rivetted ✓ Material steel ✓ Range of tensile strength 29/33 Working pressu...
IS A DONKEY BOILER FITTED 2 Yes. If so, is a report now forwarded Yes Nwc. Report No. 111314.
Is the donkey boiler intended to be used for domestic purposes only No.
PLANS. Are approved plans forwarded herewith for shafting Yes. (If not, state date of approval) Receivers... Separate
Donkey boilers Yes General pumping arrangements Yes Pumping arrangements in machinery space.
Oil fuel burning arrangements Yes.
Have Torsional Vibration characteristics been approved Yes Date and particulars of approval 5/5/53 barred rang

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes State if for "short voyages" only deep sea.
State the principal additional spare gear supplied spare screwshaft No. 26598.
spare C.1 propeller.

The foregoing is a correct description.

Sumiss Shipbuilding Co Ltd Manufacturer. J. McLean - Chief Mech. Eng.
1953. 1954.
Dates of Survey while building During progress of work in shops - Dec. 14. Jan. 19. 20. 22. 25. Feb. 3. 5. 8. 10. 11. 19. 22. 25. Mar. 1. 2. 3. 5. 10. 11. 12.
During erection on board vessel - 4. 6. 7. 10. 11. 13. 17. 18. 19. 21. 25. 26. 28. 31. April. 1. 2. 5. 6. 8. 9. 12. 15. 20. 22. 23. 26. 27. 28. 29.
25. 28. 30. July. 1. 2. 5. 6. 7. 8. 9. 13. 15. 16. 20. 22. Aug. 10. 11. 13. 19. 20. 23. 25.
96. W. Hpl. Dates. (1954) June. 22. July. 8. 12. 19. 20. 22. 23. 27. Aug. 9. 10. 11. 13.
Total No. of visits 17. 19. Total. 16.

Dates of examination of principal parts—Cylinders... Covers... Pistons... Rods... Connecting ro...
Crank shaft... Flywheel shaft... Thrust shaft... Intermediate shafts 23.3.54. Tube shaft...
Screw shaft 2.3.54. Propeller 3.3.54. Stern tube 22.2.54. Engine seatings 3.6.54. Engine holding down bolts...
Completion of fitting sea connections 3.3.54. Completion of pumping arrangements... Engines tried under working conditions...
Crank shaft, material... Identification mark... Flywheel shaft, material... Identification mark...
Thrust shaft, material... Identification mark... Intermediate shafts, material steel. Identification marks...
Tube shaft, material... Identification mark... Screw shaft, material steel. Identification mark...
Identification marks on air receivers C.3242 No.1 & 2 LT.800 WP.600. W.N. 8.2.54. ✓

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. ✓
Full description of fire extinguishing apparatus fitted in machinery spaces steam smothering ER & BR 2-10 gal. 8-2 gal.
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo oil tanker. If so, have the requirements of the Rules been complied with 4 hydrants.
What is the special notation desired...
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with none.
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, &c. The Engines, Boilers and
which have been built under Special Survey (West Hartlepool Report 19535 Nwc. Rpt. 111314,
and certificates) have been installed in this vessel in accordance with Rule Requirements
approved plans.

Main and auxiliary machinery was seen under working conditions, and basin and sea trials
several hours duration were carried out with satisfactory results. The safety valves of
boilers were adjusted to 150lbs/sq.inch. ✓
Subsequent to sea trials the vessel was examined in drydock at Palmers - Hebburn. See Nwc
Report No. 111720.

In our opinion the machinery of this vessel is eligible for record of +LMC 8.54 and TS (CL
Fitted for burning oil fuel 8.54 Flash point over 150°F. The engines are not to be operat
The amount of Entry Fee Install £ 125 - - continuously between 63 and 75 rpm
Mdb. £93:15:0d. When applied for 14/9/ 1954.
W. Hpl. £31:5:0d. When received 19
Donkey Boiler Fee...
Travelling Expenses (if any) £

Committee's Minute

Assigned +LMC 8.54 (with Torsional End!)
2 DB 150 lb.
CL.

FRIDAY 15 OCT 1954



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Foundation