

## REPORT ON OIL ENGINE MACHINERY.

No. 29900

3 DEC 1928

1 DEC 1928

Port of *Hull*

Writing Report

19

When handed in at Local Office

Date, First Survey 3 Sep. '28

Last Survey

Nov. 30 19 28

Number of Visits 43.

Survey held at

*Hull*

on the

Single

Screw vessels

*M. V. "NORTHMOOR"*

at

*Hull*

By whom built

*William Dymally & Co.*

Yard No. 590

When built

*1928*

Boilers made at

*Do*

By whom made

*Do*

Engine No. 590

When made

*1928*

Boilers made at

*Amman*

By whom made

*Bochane & Co*

Boiler No. 1139

When made

*1928*

Horse Power

Owners

*Mon Line.*

Port belonging to

*Luton*

Horse Power as per Rule 417

Is Refrigerating Machinery fitted for cargo purposes

*No*

Is Electric Light fitted

*Yes*

ENGINES, &amp;c.

Type of Engines

*Infected unless Injection*

2 or 4 stroke cycle

*2*

Single or double acting

*SINGLE*

Mean pressure in cylinders

*568 lbs*

No. of cylinders

*3*

Diameter of cylinders

*54 1/2" = 21 1/4"*

No. of cranks

*3*

Length of stroke

*2 x 1080 = 85" TOTAL*

Revolutions per minute

*90*

Flywheel dia.

*8' 8"*

Weight

*980 TONS*

Means of ignition

*COMPRESSION*

Kind of fuel used

*CRUDE OIL*

Is there a bearing between each crank

*YES*

Shaft, dia. of journals

*as per Rule APPROVED*

Crank pin dia.

*430 1/4"*

Crank Webs

*Mid. length breadth 810 1/4"*

Mid. length thickness

*245 1/4"*

Thickness parallel to axis

*245 1/4"*

Thickness around eye hole

*204 1/4"*

Intermediate Shafts, diameter

*as per Rule APPROVED*

Thrust Shaft, diameter at collars

*as per Rule APPROVED*

Shafts, diameter

*as per Rule APPROVED*

Screw Shaft, diameter

*as per Rule APPROVED*

Is the shaft fitted with a continuous liner

*YES*

Liners, thickness in way of bushes

*as per Rule APPROVED*

Liners, thickness in way of bushes

*as per Rule APPROVED*

Thickness between bushes

*as per Rule APPROVED*

Is the after end of the liner made watertight in the

*YES*

boss

*YES*

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

*YES*

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

*YES*

Liners are fitted, is the shaft lapped or protected between the liners

*YES*

Is an approved Oil Gland or other appliance fitted at the after

*YES*

Length of Bearing in Stern Bush next to and supporting propeller

*5' 6"*

Pitch

*13-9*

No. of blades

*4*

Material

*BRONZE*

Whether Moveable

*NO*

Total Developed Surface

*76*

sq. feet

Means of lubrication

*COMPRESSED AIR*

Is a governor or other arrangement fitted to prevent racing of the engine when disengaged

*YES*

Thickness of cylinder liners

*7/8" REINFORCED*

Are the cylinders fitted with safety valves

*YES*

Are the exhaust pipes and silencers water cooled or lagged with

*LAGGED*

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

*EXHAUST*

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

*FRESH WATER*

Water Pumps, No. 2

*MAIN ENGINE*

Each

*SEPARATE CENT*

Pumps fitted to the Main Engines, No.

*2*

Diameter

*12 1/2"*

Stroke

*12 1/2"*

Can one be overhauled while the other is at work

*YES*

Pumps connected to the Main Bilge Line

*NO*

No. and Size

*THREE, 12 1/2" TONS*

How driven

*STEAM*

Bilge

*12 1/2" TONS*

GEN SERVICE

*12 1/2" TONS*

BALLAST

*12 1/2" TONS*

Pumps, No. and size

*ONE @ 200 TONS PER HR*

Lubricating Oil Pumps, including Spare Pump, No. and size

*1 STEAM 10 DIRECT ACTING*

Independent means arranged for circulating water through the Oil Cooler

*NO OIL COOLER*

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

*NO*

No. and size

*4 @ 2 1/2"*

In Engine and Boiler Room

*2 @ 3 1/2" No 1, 2 @ 3 1/2" No 2, 2 @ 5" DEEP TANK, 2 @ 3" No 3, 1 @ 3 1/2" No 4, 1 @ 3" TUNNEL WELL*

Ident Power Pump Direct Suctions to the Engine Room Bilges, No. and size

*1 @ 8" TO BALLAST PMP, 1 @ 4 1/2" TO GEN SERVICE*

The Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

*YES*

Are the Bilge Suctions in the Machinery Space

*YES*

easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

*YES*

Sea Connections fitted direct on the skin of the ship

*YES*

Are they fitted with Valves or Cocks

*BOTH*

fixed sufficiently 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*

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*

How are they protected

*YES*

Have they been tested as per Rule

*YES*

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings 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 spaces, or from one

*YES*

Is the Shaft Tunnel watertight

*YES*

Is it fitted with a watertight door

*YES*

worked from

*ENG ROOM GRATING*

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

*YES*

Compressors, No.

*1*

No. of stages

*3*

Air Compressors, No.

*1*

No. of stages

*3*

Diameters

*11 1/2", 9 1/2", 3 1/2"*

Stroke

*7"*

Driven by

*STEAM CYLINDER*

Auxiliary Air Compressors, No.

*1*

No. of stages

*3*

Diameters

*9 1/2", 7 1/4", 2 1/2"*

Stroke

*6"*

Driven by

*STEAM*

Eng Air Pumps, No.

*1*

DOUBLE ACTING

*1500 1/2"*

Diameter

*1500 1/2"*

Stroke

*610 1/2"*

Driven by

*MAIN ENGINE*

Engines crank shafts, diameter

*as per Rule APPROVED*

as fitted

*YES*

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

*YES*

Internal surfaces of the receivers be examined

*YES*

What means are provided for cleaning their inner surfaces

*MANHOLE DOOR 16" x 12"*

drain arrangement fitted at the lowest part of each receiver

*YES*

Pressure Air Receivers, No.

*NONE*

Cubic capacity of each

*INTERNAL DIAMETER*

thickness

*WORKING PRESSURE BY RULES*

Cap welded or riveted longitudinal joint

*Material*

Range of tensile strength

*WORKING PRESSURE BY RULES*

Air Receivers, No.

*TWO*

Total cubic capacity

*220 CUB FT*

Internal diameter

*3' 6"*

thickness

*1"*

Cap welded or riveted longitudinal joint

*RIVETTED*

Material

*W. STEEL*

Range of tensile strength

*28 TO 32*

Working pressure by Rules

*80 LBS*

Foundation

*W202-0055*

Foundation

*W202-0055*



If so, is a report now forwarded? *Yes.*

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....	Plain cylindrical form soundness ascertained by inspection				
" " COVERS .....	None				
" " JACKETS.....	1/10/28 & 15/10/28	4 lbs.	30 lbs.	J.H.	
" PISTON WATER PASSAGES.....	3/10/28.	30 lbs.	100 lbs.	J.H.	
MAIN COMPRESSORS—1st STAGE.....	✓	✓	✓	✓	
" 2nd " .....	✓	✓	✓	✓	
" 3rd " .....	✓	✓	✓	✓	
AIR RECEIVERS—STARTING .....	24/10/28	600 lbs.	800 lbs.	NO 497 J.H.	
" INJECTION .....	None	✓	✓	✓	
AIR PIPES .....	30/10/28	600 "	1000 lbs.	J.H.	
FUEL PIPES .....	30/10/28	8000 "	12000 "	J.H.	
FUEL PUMPS .....	30/10/28	8000 "	12000 "	J.H.	
SILENCER .....	Lagged with asbestos open to atmosphere				
" WATER JACKET .....	None				
SEPARATE FUEL TANKS .....	2/10/28 & 8/10/28	Nil	10 lbs.	J.H.	

SPARE GEAR, 1 flywheel, 1 main piston with rings complete, 2 piston skirts, 1 supper, 1 lower piston & rings, 2 Centre Connecting Rod Top End, 2 Ditto Bottom End Bolts & Nuts, 2 side x head bolts & nuts, 2 Side Rod Bolts end Bolts & Nuts, 2 Side Rod Bolts & Nuts, 2 Main bearing studs & nuts, 1 set coupling bolts & set with for tunnel shaft, 1 spur, 1 bevel wheel for crankshaft drive, 4 fuel valves & casings complete, 1 relief valve, 2 scavange pump valves, 3 Fuel pump bodies complete with 3 spare rams, 1 Propeller, 1 C.T. Propeller, 1 spare straight length crankshaft, spare springs, spare lengths of fuel pipe, couplings, a quantity of various bolts & nuts & rim of various sizes, 1 section of bellows, The foregoing is a correct description, valve for each tunnel scavange pump.

WILLIAM DOXFORD & SONS, LTD.

Dates of Examination of principal parts—Cylinders 16/10/28 Covers NONE. Pistons 3/10/28 Rods 4/9/28 Connecting rods 18/10/28  
Crank shaft 12/10/28. Flywheel shaft 8 Thrust shaft 24/9/28. Intermediate shafts 16/10/28. Tube shaft ✓  
Screw shaft 24/10/28 Propeller 17/10/28 Stern tube 20/9/28. Engine seatings 31/10/28 Engines holding down bolts 12/10/28  
Completion of fitting sea connections 29/10/28 Completion of pumping arrangements 29/11/28 Engines tried under working conditions 29/10/28  
Crank shaft, Material I. STEEL Identification Mark 2602 WL Flywheel shaft, Material 8 Identification Mark 4668A  
Thrust shaft, Material I. STEEL Identification Mark 1842 MR. Intermediate shafts, Material I. STEEL Identification Marks 4720.  
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material I. STEEL. Identification Mark 4649.  
Is the flash point of the oil to be used over 150° F. 4659.

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *M.S. "GLENMOOR."*

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this engine has been built under special supervision & the material & workmanship are of the highest quality. On completion the machinery was tried at sea under full working conditions with satisfactory results.

The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the notation ~~of~~ LMC-11-28 & 7. 11-28 marked in the Society's Register Book.

The two double bottles are also fitted to burn oil fuel  
F.P. above  $150^{\circ}\text{F}$  & the requirements of Section 35 of the Rules fully  
complied with.

The amount of Entry Fee ... £ 5-0-0 ✓ When applied for,  
Special ... £ 87-11-0 22 Nov 1928  
*Air Received*  
~~Donkey Boiler Fee~~ ... £ 4-4-0 ✓ When received,  
Travelling Expenses (if any) £ : : 26 Nov 1928 *Recd.*

FRI. 7 DEC 1928

*Garbottle*  
Engineer Surveyor to Lloyd's Register of Shipping

© 20

Committee's Minute

Assigned *June 11. 28*

CERTIFICATE WILLIAM LLOYD

Oil Engines 2DB-12016

2