

## REPORT ON OIL ENGINE MACHINERY.

No. 43525.

Date of writing Report 3<sup>rd</sup> April 1924 When handed in at Local Office 7.4.1924

Received at London Office

Port of Glasgow.

WED. APR. 3 1924

No. in Survey held at Glasgow.

Date, First Survey 9<sup>th</sup> Nov. 1923 Last Survey 2<sup>nd</sup> April 1924

Reg. Book.

Number of Visits 23.

on the <sup>Single</sup> ~~Twin~~ <sup>Triples</sup> Screw vessels

"SLIEDRECHT"

Tons { Gross  
Net

Master Built at Rotterdam By whom built Rotterdam Dry Dock Co. Yard No. 92 When built

Engines made at Glasgow By whom made Harland &amp; Wolff Ltd Engine No. 60164 When made 1924

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

Brake Horse Power 1850 Owners Van Ommen Shipping Business Ltd. belonging to Rotterdam

Nom. Horse Power as per Rule 489 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

IL ENGINES, &amp;c.—Type of Engines DIESEL 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 500 LBS/SQ IN. No. of cylinders 6 No. of cranks 6 Diameter of cylinders 740 mm

Length of stroke 1500 mm Revolutions per minute 90 Means of ignition COMPRESSION Kind of fuel used ABOVE 150°F

Is there a bearing between each crank YES Span of bearings (Page 92, Section 2, par. 7 of Rules) 1004 mm

Distance between centres of main bearings 1450 mm Is a flywheel fitted YES Diameter of crank shaft journals as per Rule 470 mm as fitted 485 mm

Diameter of crank pins 485 mm Breadth of crank webs as per Rule 625 SOLID as fitted 890 BUILT Thickness of ditto as per Rule 263 mm as fitted 310 mm

Diameter of flywheel shaft as per Rule 470 mm as fitted Diameter of tunnel shaft as per Rule 13 1/8 B as fitted Diameter of thrust shaft as per Rule 13 3/4 as fitted

Diameter of screw shaft as per Rule as fitted Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made watertight in the propeller boss If the liner is in more than one length are the joints burned

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 If without liners, is the shaft arranged to run in oil

Type of outer gland fitted to stern tube Length of stern bush Diameter of propeller

Pitch of propeller No. of blades state whether moveable Total surface square feet

Method of reversing AIR Is a governor or other arrangement fitted to prevent racing of the engine when decelerated YES Thickness of cylinder liners 507 40 mm

Are the cylinders fitted with safety valves YES Means of lubrication SIGHT &amp; FORCED FEED Are the exhaust pipes and silencers water cooled or lagged with

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

No. of cooling water pumps Is the sea suction provided with an efficient strainer which can be cleared

within the vessel No. of bilge pumps fitted to the main engines Diameter of ditto Stroke

Can one be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines How driven

Sizes of pumps No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room

and in holds, etc. No. of ballast pumps How driven Sizes of pumps

Is the ballast pump fitted with a direct suction from the engine room bilges State size Is a separate auxiliary pump suction fitted in

Engine Room and size Are all the bilge suction pipes fitted with roses Are the roses in Engine Room always accessible

Are the sluices on Engine Room bulkheads always accessible Are all connections with the sea direct on the skin of the ship

Are they valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates

Are the discharge pipes above or below the deep water line Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Are the bilge suction pipes, cocks and valves arranged so as to prevent any

communication between the sea and the bilges Is the screw shaft tunnel watertight Is it fitted with a watertight door

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

No. of main air compressors No. of stages 3 (65 mm) Diameters 750 x 675 x 500 mm Stroke 460 mm Driven by MAIN ENGINE

No. of auxiliary air compressors No. of stages 3 (65 mm) Diameters 360 x 315 x 72 mm Stroke 230 mm Driven by STEAM. supplied by H.V.O.

No. of small auxiliary air compressors No. of stages Diameters Stroke Driven by

No. of scavenging air pumps Diameter Stroke Driven by

Diameter of auxiliary Diesel Engine crank shafts as per Rule as fitted Are the air compressors and their coolers made so as to be easy of access YES

RECEIVERS:—No. of high pressure air receivers 2 Internal diameter 295 mm Cubic capacity of each 150 LITRES

Material STEEL Seamless, lap welded or riveted longitudinal joint SEAMLESS Range of tensile strength 28-32 TONS/SQ IN.

Thickness 61 mm Working pressure by Rules 1455 LBS/SQ IN. No. of starting air receivers Internal diameter

Total cubic capacity Material Seamless, lap welded or riveted longitudinal joint

Range of tensile strength thickness Working pressure by rules Is each receiver, which can be isolated,

fitted with a safety valve as per Rule SAFETY VALVE ON COMPRESSOR Can the internal surfaces of the receivers be examined YES What means are provided for cleaning their

Internal surfaces DETACHABLE HEADS. Is there a drain arrangement fitted at the lowest part of each receiver YES

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	✓				
COVERS	14-2-24 to 26-2-24	15 LBS/SQ	50 LBS/SQ	HMB	
JACKETS	12-2-24 to 7-3-24	15 LBS/SQ	50 LBS/SQ	HMB	
PISTON WATER PASSAGES	15-1-24 to 16-1-24	15 LBS/SQ	50 LBS/SQ	HMB	
MAIN COMPRESSORS—1st STAGE	5-2-24	71 LBS/SQ	150 LBS/SQ	HMB	
2nd	6-2-24	220 LBS/SQ	500 LBS/SQ	HMB	
3rd	14-2-24	1000 LBS/SQ	2000 LBS/SQ	HMB	
AIR RECEIVERS—STARTING	✓				
INJECTION	9-1-24	1000 LBS/SQ	2000 LBS/SQ	HMB	A.Y. N° 5381534
AIR PIPES STARTING	1-2-24 to 2-4-24	356 LBS/SQ	712 LBS/SQ	HMB	
MANOEUVRING COMPRESSOR	4-2-24	71 LBS/SQ	150 LBS/SQ	HMB	
FUEL PIPES 1st STAGE					
FUEL PUMPS 2nd	5-2-24	220 LBS/SQ	500 LBS/SQ	HMB	
SILENCER 3rd	29-11-23	1000 LBS/SQ	2000 LBS/SQ	HMB	
WATER JACKET	✓				
SEPARATE FUEL TANKS	✓				

PLANS. Are approved plans forwarded herewith for shafting Feb. 1921  
(If not, state date of approval)

Receivers ✓

Separate Tanks ✓

SPARE GEAR will be supplied as per attached list

The foregoing is a correct description,  
For HARLAND & WOLFF, LTD.

J. C. Green,

Manufacturer.

MANAGER FINNIESTON WORK

Dates of Survey while building  
During progress of work in shops-- 1923 Nov 9-29 Dec 26 1924 Jan 3. 9. 15. 16. 28 Feb 1. 4. 5. 6. 8. 12. 14. 19. 20. 25. 26 Mar 3. 4. 7. 21. 24  
During erection on board vessel--  
Total No. of visits 23.

Dates of Examination of principal parts—Cylinders 14/2/24 Covers 14/2/24 Pistons 15/16/1/24 Rods 19/2/24 Connecting rods 20/2/24  
Crank shaft 28/1/24 Thrust shaft ✓ Tunnel shafts ✓ Screw shaft ✓ Propeller ✓ Stern tube ✓ Engine seatings ✓

Engines holding down bolts ✓ Completion of pumping arrangements ✓ Engines tried under working conditions ✓

Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓

Material of crank shaft STEEL Identification Mark on Do. HMB 28/1/24 Material of thrust shaft ✓ Identification Mark on Do. ✓

Material of tunnel shafts ✓ Identification Marks on Do. ✓ Material of screw shafts ✓ Identification Marks on Do. ✓

Is the flash point of the oil to be used over 150° F. YES

Is this machinery duplicate of a previous case YES If so, state name of vessel M/S "GUJARAT" (MAIN ENGINE ONLY)

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery (main motor & manoeuvring engine) have been built under special survey in accordance with the rules and approved plan, the materials and workmanship are sound and good. The machinery is being shipped to Rotterdam for fitting in the vessel and is eligible in my opinion to be classed with record of L.M.C. with date when it has been fitted on board in an efficient manner.

The amount of Entry Fee ... £ 5 : 0  
4/5 Special ... £ 78 : 13  
Donkey Boiler Fee ... £ ✓ :  
Travelling Expenses (if any) £ ✓ :  
When applied for, 8/4/1924  
When received, 31/5/1924

H. M. C. Crivick  
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 3 OCT 1924

Committee's Minute

GLASGOW

28 APR 1924

Assigned Deferred.