

Comm. 254704

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 129  
14 AUG 1936

Received at London Office

Date of writing Report 3rd Aug. 1936. When handed in at Local Office

Port of Wisselroef

No. in Survey held at Reg. Book. Cologne

Date, First Survey 6th July 1936 Last Survey 28th July 1936

Number of Visits

on the Single Twin Triple Quadruple Screw vessel

Tons <sup>Gross</sup> <sub>Net</sub>

Built at Goolle By whom built Messrs Goolle Shipbuilding Rep. Co. Yard No. 319 When built 1936

Engines made at Cologne By whom made Messrs Humboldt & Degener A.G. Engine No. 382099/104 When made 1936

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

Brake Horse Power 300 Owners Approved for 350 BHP. Port belonging to \_\_\_\_\_

Nom. Horse Power as per Rule 20 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

Trade for which vessel is intended \_\_\_\_\_

## OIL ENGINES, &c.—Type of Engines Heavy Oil Engine 2 1/2 No 345 2 or 4 stroke cycle four Single or double acting single

Maximum pressure in cylinders 50 kg cm<sup>2</sup> Diameter of cylinders 280 mm Length of stroke 450 mm No. of cylinders Six No. of cranks Six

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 304.5 mm Is there a bearing between each crank Yes

Revolutions per minute 300 Flywheel dia. 1250 mm Weight 2600 kg Means of ignition solid injection Kind of fuel used \_\_\_\_\_

Crank Shaft, dia. of journals 190 mm as per Rule 190 mm as fitted Crank pin dia. 170 mm Crank Webs Mid. length breadth 32.5 mm Thickness parallel to axis \_\_\_\_\_

Flywheel Shaft, diameter as per Rule as fitted Short - Intermediate Shafts, diameter as per Rule 16 Thrust Shaft, diameter at collars as per Rule as fitted \_\_\_\_\_

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as fitted \_\_\_\_\_ Is the tube screw shaft fitted with a continuous liner \_\_\_\_\_

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the propeller boss \_\_\_\_\_

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

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 \_\_\_\_\_ Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft \_\_\_\_\_

Propeller, dia. \_\_\_\_\_ Pitch \_\_\_\_\_ No. of blades \_\_\_\_\_ Material \_\_\_\_\_ whether Moveable \_\_\_\_\_ Total Developed Surface \_\_\_\_\_ sq. feet

Method of reversing Engines direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication \_\_\_\_\_

Thickness of cylinder liners 2.5 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material water cooled

Cooling Water Pumps, No. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel \_\_\_\_\_

What special arrangements are made for dealing with cooling water if discharged into bilges \_\_\_\_\_

Bilge Pumps worked from the Main Engines, No. one Diameter 100 mm Stroke 85 mm Can one be overhauled while the other is at work \_\_\_\_\_

Pumps connected to the Main Bilge Line { No. and Size \_\_\_\_\_ How driven \_\_\_\_\_

Ballast Pumps, No. and size \_\_\_\_\_ Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 wheel pump & 1 sp. all

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces \_\_\_\_\_ In Pump Room \_\_\_\_\_

In Holds, &c. \_\_\_\_\_

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size \_\_\_\_\_

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes \_\_\_\_\_ Are the Bilge Suctions in the Machinery Spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges \_\_\_\_\_

Are all Sea Connections fitted direct on the skin of the ship \_\_\_\_\_ Are they fitted with Valves or Cocks \_\_\_\_\_

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates \_\_\_\_\_ Are the Overboard Discharges above or below the deep water line \_\_\_\_\_

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel \_\_\_\_\_ Are the Blow Off Cocks fitted with a spigot and brass covering plate \_\_\_\_\_

What pipes pass through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_

What pipes pass through the deep tanks \_\_\_\_\_ Have they been tested as per Rule \_\_\_\_\_

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_

Is the 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 compartment to another \_\_\_\_\_

Is the Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

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

Main Air Compressors, No. one No. of stages Two Diameters 145x60 mm Stroke 85 mm Driven by main engines

Auxiliary Air Compressors, No. \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_

Small Auxiliary Air Compressors, No. \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_

Scavenging Air Pumps, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_

Auxiliary Engines crank shafts, diameter as per Rule as fitted \_\_\_\_\_ No. — \_\_\_\_\_ Position — \_\_\_\_\_

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

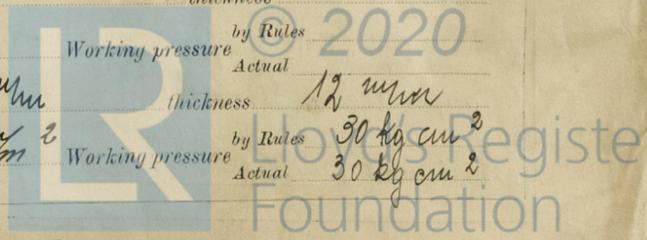
Can the internal surfaces of the receivers be examined and cleaned \_\_\_\_\_ Is a drain fitted at the lowest part of each receiver \_\_\_\_\_

High Pressure Air Receivers, No. \_\_\_\_\_ Cubic capacity of each \_\_\_\_\_ Internal diameter \_\_\_\_\_ thickness \_\_\_\_\_

Seamless, lap welded or riveted longitudinal joint \_\_\_\_\_ Material \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Working pressure by Rules Actual \_\_\_\_\_

Starting Air Receivers, No. Two Total cubic capacity 1000 litres Internal diameter 450 mm thickness 12 mm

Seamless, lap welded or riveted longitudinal joint lap welded Material No. 9A Range of tensile strength 38 kg/cm<sup>2</sup> Working pressure by Rules Actual \_\_\_\_\_



003147-003153-0070

**IS A DONKEY BOILER FITTED?**

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 *13th February 1935* Receivers *2nd July 1932* Separate Tanks

Donkey Boilers ..... General Pumping Arrangements ..... Oil Fuel Burning Arrangements .....

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied *Yes*

State the principal additional spare gear supplied *1 main bearing, 1 crank bearing, 1 gudgeon bearing, 1 complete fuel valve, 2 sets of suction and delivery valves of the fuel pumps, an assortment of valve springs, fuel needles.*

The foregoing is a correct description.

*[Signature]* Humboldt-Deutzmotoren, Aktiengesellschaft  
Manufacturer.

Dates of Survey while building	During progress of work in shops - -		<i>6th July - 9th July - 25th July and 28th July 1936.</i>				
	During erection on board vessel - - -						
	Total No. of visits						
Dates of Examination of principal parts	Cylinders	Covers	Pistons	Rods	Connecting rods		
	<i>6.7.36</i>	<i>6.7.36</i>	<i>6.7.36</i>		<i>6.7.36</i>		
	Crank shaft	Flywheel shaft	Thrust shaft	Intermediate shafts	Tube shaft		
	<i>9.7.36</i>		<i>9.7.36</i>	<i>9.7.36</i>			
	Screw shaft	Propeller	Stern tube	Engine seatings	Engines holding down bolts		
Completion of fitting sea connections	Completion of pumping arrangements			Engines tried under working conditions			
Crank shaft, Material	<i>S. M. S.</i>	Identification Mark	<i>12016 N.B. 1/4.36</i>	Flywheel shaft, Material	Identification Mark		
Thrust shaft, Material	<i>S. M. S.</i>	Identification Mark	<i>18028 R. 15/5.36</i>	Intermediate shafts, Material	<i>S. M. S.</i>	Identification Marks	
					<i>16300 X.B. 16/4.36</i>		
Tube shaft, Material	Identification Mark		Screw shaft, Material	Identification Mark			

Is the flash point of the oil to be used over 150° F. \_\_\_\_\_  
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with \_\_\_\_\_  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo \_\_\_\_\_ 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 *Yes* If so, state name of vessel *Messrs. Goole Shipbuilding & Rep. Co. yard No. 317*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines have been built in accordance with the approved plans and the requirements embodied in the Secretary's letter of the 13th February and otherwise in accordance with the requirements of the Rules. Material and workmanship are of best quality, the outfit is ample. The engines have been tested under full working and manoeuvring conditions for six hours on the trial stage in machine shop and have given full satisfaction. After trial all working parts have been opened up and were found on examination in good condition. This machinery has been built under special survey and will be fitted on board the vessel No. 319 in construction at Messrs. Goole Shipbuilding & Repairing Co. of Goole.*  
*In my opinion this machinery is eligible for notation.* *W.E. 8.36.*

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

The amount of Entry Fee	<i>32.-</i>	When applied for,	
4/5 Special	<i>280.-</i>	5. Aug. 1936	Account
Donkey Boiler Fee		When received,	<i>No. D 9324</i>
Travelling Expenses (if any)	<i>40.-</i>	3.11.19	<i>367 6111</i>

Committee's Minute *FRI. 6 NOV 1936*  
 Assigned *See Hull 47324*

*[Signature]*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
  
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