

# REPORT ON OIL ENGINE MACHINERY.

No. 115

st. 4b.  
No. 20840139  
257

Date of writing Report 22.6.1956 When handed in at Local Office 19 Port of Köln Received at London Office 10 OCT 1956  
Survey held at Köln-Deutz Date, First Survey 9.5.56 Last Survey 22.6.1956  
Number of Visits 7

Single on the Twin Triple Quadruple Screw vessel  
Built at Bremerhaven By whom built F. Schichau A.G. Yard No. 1674 Tons Gross - Net -  
Engines made at Köln-Deutz By whom made Klöckner-Humboldt-Deutz AG. Engine No. 2081529-36 When built -  
Key Boilers made at - By whom made - Boiler No. - When made 6.56.  
Horse Power Maximum 660 Owners Caselee and Sons Ltd. Port belonging to London -  
Service 132 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -  
Use for which vessel is intended -

ENGINES, &c. - Type of Engines Airl. Inj. Heavy Oil Eng. SV8M<sup>545</sup> 2 or 4 stroke cycle 4 Single or double acting single  
Maximum pressure in cylinders 60 kg/cm<sup>2</sup> Diameter of cylinders 320 mm Length of stroke 450 mm No. of cylinders 8 No. of cranks 8  
Indicated Pressure 6.59 kg/cm<sup>2</sup> Span of bearings (i.e., distance between inner edges of bearings in  
of a crank) 346 mm Is there a bearing between each crank yes Revolutions per minute Maximum 375 Service 375  
Wheel dia. 1500 mm Weight 3300 kg Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 5000 Means of ignition compr. Kind of fuel used Diesel

Balance wts. ( " " " " )  
Solid forged dia. of journals as per Rule appr. 18.2.55 210 mm Crank pin dia. 210 mm Crank webs Mid. length breadth 350 mm Thickness parallel to axis -  
Semi built as fitted 220 mm Crank webs Mid. length thickness 93 mm shrunk Thickness around eyehole -  
All built as fitted - Thrust Shaft, diameter at collars as per Rule - as fitted -

Shaft, diameter as per Rule - as fitted - Intermediate Shafts, diameter as per Rule - as fitted -  
Screw Shaft, diameter as per Rule - as fitted - Is the tube screw shaft fitted with a continuous liner -  
Liners, thickness in way of bushes as per Rule - Thickness between bushes as per Rule - Is the after end of the liner made watertight in the  
celler boss - If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -  
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-  
combustive - If two liners are fitted, is the shaft lapped or protected between the liners - Is an approved Oil Gland fitted at the after  
end of stern tube - If so, state type - Length of bearing in Stern Bush next to and supporting propeller -

Propeller, dia. - Pitch - No. of blades - Material - whether moveable - Total developed surface - sq. feet  
Moment of inertia of propeller including entrained water (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) - Kind of damper, if fitted vibration damper  
Method of reversing Engines not reversible Is a governor or other arrangement fitted to prevent racing of the engine yes Means of  
operation forced Thickness of cylinder liners 20 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled  
lined with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
to the engine - Cooling Water Pumps, No. and how driven One by M.E. Working F.W. -  
S.W. Spare F.W. - S.W. - Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

Pumps worked from the Main Engines, No. and capacity One capacity 15<sup>3</sup>/h. Can one be overhauled while the other is at work -  
Pumps connected to the Main Bilge Line (No. and capacity of each - How driven No other information than above.  
Cooling water led to the bilges - If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping  
arrangements -

Oil Pumps, No. and capacity - Power Driven Lubricating Oil Pumps, including spare pump, No. and size One driven by M.E.  
No independent means arranged for circulating water through the Oil Cooler - Branch Bilge Suctions capacity 180 ltr. p. min  
at 310 r.p.m. -  
In pump room -

Branch Bilge Suctions to the engine room bilges, No. and size -  
Are the bilge suction pipes in holds and tunnel well fitted with strum-boxes - Are the bilge suction in the machinery spaces led from easily  
removable mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges -

Sea Connections fitted direct on the skin of the Ship - Are they fitted with valves or cocks - Are they fixed  
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 -

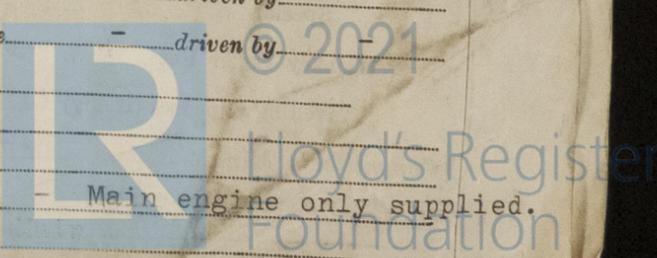
Pipes pass through the bunkers - How are they protected -  
Pipes pass through the deep tanks - Have they been tested as per Rule -  
Pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times -

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  
space or from one compartment to another - Is the shaft tunnel watertight - Is it fitted with a watertight door - worked from -  
On a cargo vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -

Air Compressors, No. One mounted ME. No. of stages two diameters 145/60mm stroke 85 mm driven by M.E.  
Auxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by -  
Auxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by -

Provision is made for first charging the air receivers -  
Air Pumps or Blowers, No. - How driven -  
Have they been made under survey - Engine Nos. -  
Makers' name - Position of each in engine room - Main engine only supplied.

Report No. -



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Cert. HNO. C. 56/74  
Cert. DF. C. 7639

**AIR RECEIVERS:**—Have they been made under survey yes State No. of report or certificate  
 State full details of safety devices each receiver head has been equipped with a safety valve.  
 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. - Cubic capacity of each - Internal diameter - thickness -  
 Seamless, welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure -  
 Starting Air Receivers, No. Two Total cubic capacity 750 ltrs. Internal diameter 460 mm thickness 10 mm  
 Seamless, welded or riveted longitudinal joint welded Material SM. Steel Range of tensile strength 47/53 kg/mm<sup>2</sup> Working pressure 30 kg/cm<sup>2</sup>

**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 appr. 18.2.55 Receivers appr. 23.1.50 Separate fuel tanks -  
 (If not, state date of approval)  
 Donkey boilers - General pumping arrangements - Pumping arrangements in machinery space -  
 Oil fuel burning arrangements -

Have Torsional Vibration characteristics been approved yes Date and particulars of approval London letter dated 24th Jul

**SPARE GEAR.** not below 100 RPM

Has the spare gear required by the Rules been supplied yes State if for "short voyages" only -  
 State the principal additional spare gear supplied -

**Klöckner-Humboldt-Deutz**

The foregoing is a correct description of the engine  
 Manufacturer Milich  
 Dates of Survey while building  
 During progress of work in shops 1956: May 9. 16. 18. 22. June 11. 13. 22.  
 During erection on board vessel -  
 Total No. of visits 7

Dates of examination of principal parts—Cylinders 9.5.11.5.13.6. Covers 25.5.13.6. Pistons 13.6. Rods - Connecting rods 18.5.1  
 Crank shaft 16.5.13.6. Flywheel shaft - Thrust shaft - Intermediate shafts - Tube shaft -  
 Screw shaft - Propeller - Stern tube - Engine seatings - Engine holding down bolts -  
 Completion of fitting sea connections - Completion of pumping arrangements - Engines tried under working conditions 11.6.  
 Crank shaft, material SM. Steel Identification mark Lloyd's Dsf. 108 H.S. Flywheel shaft, material - Identification mark -  
 Thrust shaft, material - Identification mark - Intermediate shafts, material - Identification marks -  
 Tube shaft, material - Identification mark - Screw shaft, material - Identification mark -  
 Identification marks on air receivers LLOYD'S TEST HNO.T.P.60 ATM., W.P.30 ATM., No.13732 K.M.27.12.55 K.M.  
LLOYD'S TEST DSF.T.P.60 ATM., W.P.30 ATM., No.8267 K.M.21.4.53 K.M.

Welded receivers, state Makers' Name Ruhrstahl AG. Brackwede  
 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 -  
 Full description of fire extinguishing apparatus fitted in machinery spaces -  
 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 -  
 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 -  
 Is this machinery duplicate of a previous case yes If so, state name of vessel Societe Cherbourgoise D'Arme  
Yard No. 355, KLN.Rpt.No.63

**General Remarks** (State quality of workmanship, opinions as to class, Speed restrictions, &c. -)  
 This engine has been constructed under special survey of tested materials and is in accordance with the Secretary's letters, approved plans and Rule Requirements. The materials and workmanship are good and the engine, when tested in the shops under full and overload conditions was found to be satisfactory. The governor tests were also satisfactory. This engine is suitable, in my opinion for main propelling purposes and when satisfactorily installed and reported will be eligible for receiving the notation LMC. (with date) .-

Explosion relief devices have been fitted in accordance with the Rules Chapter H Section 8 Par. -

The amount of Entry Fee ... DM £ 700.- :  
 Running Tests ... DM 100.- :  
 Special ... £ : :  
 Donkey Boiler Fee... £ : :  
 Travelling Expenses (if any) £DM :80.- :  
 When applied for 19  
 When received 19  
alc No. R432

Ab. Springmann  
 Engineer Surveyor to Lloyd's Register of Shipping  
 Lloyd's Register Foundation

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

Committee's Minute FRIDAY - 7 MAR 1958  
 Assigned See Rpt. 1.