

# REPORT ON OIL ENGINE MACHINERY.

No. 44971  
-9 SEP 1925

Received at London Office

Date of writing Report

19... When handed in at Local Office

5/9/25 Port of Glasgow

No. in Survey held at Reg. Book.

Glasgow

Date, First Survey

Last Survey 28-8-25 19

Number of Visits

on the <sup>Single</sup> ~~Double~~ <sub>Triple</sub> Screw vessels

M.V. CITY OF STOCKHOLM

Tons <sup>Gross</sup> 5075  
<sub>Net</sub> 3155

Master

Built at Glasgow

By whom built Barclay Curie & Co. Yard No. 608 When built 1925

Engines made at Glasgow

By whom made North British Diesel Ltd. Engine No. 35 When made 1925

Donkey Boilers made at Annan

By whom made Cochran & Co. Annan Ltd. Boiler No. 9105 When made 1925

Brake Horse Power 2000

Owners Ellerman Line Ltd.

Port belonging to Liverpool

Nom. Horse Power as per Rule 626

Is Refrigerating Machinery fitted for cargo purposes *no*

Is Electric Light fitted *yes*

OIL ENGINES, &c.—Type of Engines 2 S.C.D.A. *Hidingly* Diesel 2 or 4 stroke cycle 2 Single or double acting *double*

Maximum pressure in cylinders 450 lbs. No. of cylinders 3 No. of cranks 3 Diameter of cylinders 24 1/2

Length of stroke 4 1/4 Revolutions per minute 85/100 Means of ignition *compression* Kind of fuel used *Heavy oil*

Is there a bearing between each crank *yes* Span of bearings (Page 92, Section 2, par. 7 of Rules) 38.5

Distance between centres of main bearings 63.5 Is a flywheel fitted *no* Diameter of crank shaft journals *as per Rule* *approved* 16 3/4

Diameter of crank pins 16 1/2 Breadth of crank webs *as per Rule* *approved* 30.5 Thickness of ditto *as per Rule* *approved* 10 1/4

Diameter of flywheel shaft *as per Rule* *approved* 12 1/2 Diameter of tunnel shaft *as per Rule* *approved* 14 3/4

Diameter of screw shaft *as per Rule* 13.375 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *yes*

Is the after end of the liner made watertight in the propeller boss *yes* If the liner is in more than one length are the joints burned *no*

Is 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 *yes*

If two liners are fitted, is the shaft lapped or protected between the liners *no* If without liners, is the shaft arranged to run in oil *no*

Is the gland of outer gland fitted to stern tube *none* Length of stern bush 4'-7" Diameter of propeller 15'-9"

Diameter of propeller 13'-6" No. of blades 4 state whether moveable *yes* Total surface 85 square feet

Kind of reversing *direct* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *no* Thickness of cylinder liners 1.9"

Are the cylinders fitted with safety valves *yes* Means of lubrication *forced sight* Are the exhaust pipes and silencers water cooled or lagged with conducting material *yes*

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

No. of cooling water pumps 2 Is the sea suction provided with an efficient strainer which can be cleared *yes*

No. of bilge pumps fitted to the main engines *none* Diameter of ditto *no* Stroke *no*

Can one be overhauled while the other is at work *no* No. of auxiliary pumps connected to the main bilge lines 2 How driven *Steam*

No. and sizes of suction connections connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 4-2 1/2 1-2 1/2 funnel well

In holds, etc. 6 @ 3 1/2 holds 2 @ 2 1/2 deep tank No. of ballast pumps *one* How driven *steam* Sizes of pumps 8-10-10

Is the ballast pump fitted with a direct suction from the engine room bilges *yes* State size 5" Is a separate auxiliary pump suction fitted in engine room and size 7" bore

Are all the bilge suction pipes fitted with roses *straight pipes* Are the roses in Engine Room always accessible *no*

Are the valves on Engine Room bulkheads always accessible *none* Are all connections with the sea direct on the skin of the ship *yes*

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

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

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

Is the screw shaft tunnel watertight *yes* Is it fitted with a watertight door *yes*

Is the machinery worked from *above bulkhead* If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *no*

No. of main air compressors *one* No. of stages 3 Diameters 6-28 3/8-25 1/2 Stroke 28 1/2 Driven by *M.C. Bank*

No. of auxiliary air compressors *one* No. of stages 3 Diameters 4 1/2-9-16 1/2 Stroke 9 Driven by *Steam*

No. of small auxiliary air compressors *none* No. of stages *no* Diameters *no* Stroke *no* Driven by *no*

No. of scavenging air pumps *one* Diameter 55" Stroke 38" Driven by *M.C. Bank*

Diameter of auxiliary Diesel Engine crank shafts *as per Rule* *none* Are the air compressors and their coolers made so as to be easy of access *yes*

AIR RECEIVERS:—No. of high pressure air receivers 2 Internal diameter 17 3/4 Cubic capacity of each 1 @ 12 cu. ft. 1 @ 18 cu. ft.

Material *welded steel* Seamless, lap welded or riveted longitudinal joint *seamless* Range of tensile strength 28-30

Thickness 5/8 working pressure by Rules 1090 No. of starting air receivers 2 Internal diameter 60"

Total cubic capacity 674 cu. ft. Material *steel* Seamless, lap welded or riveted longitudinal joint *riveted*

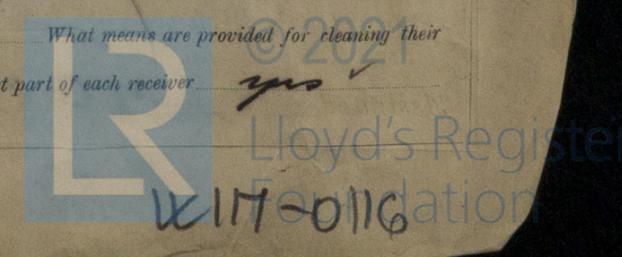
Range of tensile strength *shell & ship 28-32 ends 26-30* thickness 13/32 Working pressure by rules 534 lbs. Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes*

Can the internal surfaces of the receivers be examined *yes* What means are provided for cleaning their inner surfaces *manhole*

Is there a drain arrangement fitted at the lowest part of each receiver *yes*

Length.	Water Capacity.
Feet.	Tons.
20.6	141.5
20.0	58.1
26.25	104.9
26.5	

6.19.24.29.31.  
3.18.20.  
Total No. of Visits 4



IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....					
"    "    COVERS .....	7.8.24 to 15.9.24		30 lbs.	H.C.P. J.D.B.	
"    "    JACKETS.....	3.9.24 to 12.9.24		30 lbs.	H.C.P.	
"    "    PISTON WATER PASSAGES.....	31.7.24 to 11.8.24		30 lbs.	H.C.P. J.D.B.	
MAIN COMPRESSORS—1st STAGE.....	14.7.24 <i>times</i>		550 lbs.	D.C.B.	1 <sup>st</sup> & 2 <sup>nd</sup> stage lining in one casting
"    "    2nd .....					
"    "    3rd .....	1.5.24 to 28.5.24		30 lbs. 2000 lbs.	H.C.P.	
AIR RECEIVERS—STARTING .....	25.9.24	475	675	H.C.P.	
"    "    INJECTION .....	28.1.25	1000	2000	A.C.	
AIR PIPES .....	28.1.25 to 5.5.25	475	950	A.D.M.	
FUEL PIPES .....	26.1.25 to 30.1.25		30	A.D.M.	
FUEL PUMPS .....					
SILENCER .....					
"    "    WATER JACKET .....					
SEPARATE FUEL TANKS .....	21.1.25 to 5.2.25		10 lbs.	A.D.M.	

PLANS. Are approved plans forwarded herewith for shafting *19.4.24*

Receivers *23.4.24* Separate Tanks *22.10.24*

SPARE GEAR *All as per rule requirements*

The foregoing is in correct description

*North British Diesel Engine Works (1922) LTD.*

Manufacturer.

*J. MacLagan* Chief Draughtsman.

Dates of Survey while building  
 During progress of work in shops - - 1923. Nov. 19. 20. Dec 3. 24. 1924. Jan. 10. 15. 29. Feb. 4. 19. 26. Mar. 10. 24. Apr. 1. 7. 14. 29. May 1. 7. 12. 25. 28. June 2. 9. 14. 21. 28. July 4. 7. 11. 12. 17. 19. 22. 23. 25. Oct. 2. 3. 6. 7. 10. 15. 20. 24. 27.  
 During erection on board vessel - - 1925. Jan. 15. 16. 20. 24. 25. 26. 28. 30. Feb. 2. 5. 6. 12. 19. 23. Mar. 4. 5. 12. 17. 24. 26. Apr. 2. 24. May 5. 6. 13. 18. 20. June 9. 17. July 1. 12. 26. 28.  
 Total No. of visits *96*

Dates of Examination of principal parts—Cylinders *12.9.24* Covers *25.9.24* Pistons *31.7.24* Rods *—* Connecting rods *22.9.24*

Crank shaft *12.5.24* Thrust shaft *12.5.24* Tunnel shafts *3.11.24* Screw shaft *31.12.24* Propeller *13.11.24* Stern tube *13.11.24* Engine seatings *26.12.24*

Engines holding down bolts *13.5.25* Completion of pumping arrangements *18.5.25* Engines tried under working conditions *20.5.25*

Completion of fitting sea connections. *21.1.25* Stern tube *26.12.24* Screw shaft and propeller *16.1.25*

Material of crank shaft *steel* Identification Mark on Do. *LLOYDS N°281 H.C.P. 12.5.24* Material of thrust shaft *steel* Identification Mark on Do. *LLOYDS N°281 H.C.P. 12.5.24*

Material of tunnel shafts *steel* Identification Marks on Do. *LLOYDS N°281 A.D.M. 23.1.25* Material of screw shafts *steel* Identification Marks on Do. *LLOYDS N°281 A.D.M. 23.1.25*

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.V. "SWANLEY"*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been constructed under Special Survey in accordance with the Rules and approved plans; the materials and workmanship are good. The machinery has been satisfactorily fitted on board the vessel, examined under full working conditions and found satisfactory and is eligible in my opinion to have the record of + L.M.C 8.25 in the Register Book.*

The amount of Entry Fee ... £ 6 : 0 :  
 Special ... £ 106 : 6 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, *7.9.25*  
 When received, *10.9.25*

*A.D. Morrison*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 8-SEP 1925*

Assigned *+ L.M.C 8.25*

CERTIFICATE WRITTEN *17/9/25* dated *9-9-25*



F.P. 1/2 Glasgow

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