

REPORT ON OIL ENGINE MACHINERY.

No. 12
-1 DEC 1936

Received at London Office

Date of writing Report 28. 11. 1936 When handed in at Local Office 28. 11. 1936 Port of DANZIG.
No. in Survey held at Elbing + Danzig Date, First Survey 28th September Last Survey 7th Nov 1936
Reg. Book. 90420 on the ^{Single} Twin ^{Triple} Screw vessel 'TARIFA' Number of Visits 91
Master J. Built at Danzig By whom built F. Schichau G. & H. Yard No. 1357 When built 1936
Engines made at Elbing By whom made F. Schichau G. & H. Engines No. 3636/37 When made 1936
Donkey Boilers made at Kiel By whom made Deutsche Werke A.G. Kiel Boiler No. 1170 When made 1936
Brake Horse Power 8800 Owners W. Wilhelmsen. Oslo Port belonging to Lönaberg
Nom. Horse Power as per Rule 1827. Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes

IL ENGINES, &c.—Type of Engines Schichau Sulzer. 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 60 Kp cm² No. of cylinders 16 No. of cranks 16 Diameter of cylinders 650 mm
Length of stroke 1200 mm Revolutions per minute 125 Means of ignition Compression Kind of fuel used Diesel oil
Is there a bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 840 mm
Distance between centres of main bearings 1220 mm Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule as approved
Diameter of crank pins 460 mm as per Rule as approved Diameter of crank webs as per Rule as approved Thickness of ditto as per Rule as approved
Diameter of flywheel shaft as per Rule as approved Diameter of tunnel shaft as per Rule as approved Diameter of thrust shaft as per Rule as approved
Diameter of screw shafts as per Rule as approved 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
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 1800 mm Diameter of propellers 4350 mm
Pitch of propellers 4900 mm No. of blades 4 state whether moveable fixed Total surface Each 7.2 square feet
Method of reversing Oil pressure Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners 46 mm
Are the cylinders fitted with safety valves Yes Means of lubrication Forced Are the exhaust pipes and silencers water cooled or lagged with
non-conducting material lagged 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 3 Is the sea suction provided with an efficient strainer which can be cleared
within the vessel Yes No. of bilge pumps fitted to the main engines none Diameter of ditto Stroke
Can one be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines 3 How driven Electrically
Sizes of pumps 80, 80, +150 mm dia No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 22150 + 1290 mm dia
and in holds, etc. 2. 1295 + 1290 mm dia No. of ballast pumps 1 How driven Electrically Sizes of pumps 150 mm dia
Is the ballast pump fitted with a direct suction from the engine room bilges Yes State size 150 mm dia Is a separate auxiliary pump suction fitted in
Engine Room and size Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine Room always accessible Yes
Are the slits on Engine Room bulkheads always accessible Yes Are all connections with the sea direct on the skin of the ship Yes
Are they 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 above 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
Worked from main deck 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 Diameters Stroke Driven by
No. of auxiliary air compressors 2 No. of stages 2 Diameters 105 + 270 mm Stroke 220 mm Driven by Electric motor
No. of small auxiliary air compressors 1 No. of stages 2 Diameters 45 + 105 mm Stroke 83 + 91 mm Driven by Hand.
No. of scavenging air pumps 2 Diameters 1600 mm Stroke 640 mm Driven by main Engine
Diameter of auxiliary Diesel Engine crank shafts as per Rule as approved Are the air compressors and their coolers made so as to be easy of access Yes
as fitted Hamburg Reports
Nos 22007 + 22008 + 22009.

AUXILIARY STARTING
R RECEIVERS: No. of high pressure air receivers 1 Internal diameter 374 mm Cubic capacity of each 200 litres
Material Siemens Martin Steel Seamless, lap welded or riveted longitudinal joint Seamless Range of tensile strength 50 Kp cm²
Thickness 8 mm working pressure by Rules 42 Kp cm² No. of starting air receivers 4 Internal diameter 1252 mm
Total cubic capacity 16 cbm + each Material Siemens Martin Steel Seamless, lap welded or riveted longitudinal joint riveted
Range of tensile strength 42.8 - 49.8 Kp cm² Thickness 28 mm Working pressure by rules 32.5 Kp 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 mechanical Is there a drain arrangement fitted at the lowest part of each receiver Yes

W264-0281

IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded? Yes. See also Hamburg Report No 21940

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	Dates between 17/3/36 and 14/7/36	60 Kp/cm ²	110 Kp/cm ²	J.C.D. with dates	
" " COVERS	Dates between 10/3/36 and 14/9/36	60 Kp/cm ²	110 Kp/cm ²	J.C.D. with dates	
" " JACKETS	Dates between 10/3/36 and 14/9/36	2 Kp/cm ²	6 Kp/cm ²	J.C.D. with dates	
" " OIL PISTON WATER PASSAGES	Dates between 10/1/36 and 25/5/36	2 Kp/cm ²	6 Kp/cm ²	J.C.D. with dates	
MAIN COMPRESSORS—1st STAGE					
" 2nd "					
" 3rd "					
AIR RECEIVERS—STARTING	28th July 1936	30 Kp/cm ²	45 Kp/cm ²	J.C.D. with date	
" INJECTION					
AIR PIPES	Dates between 24/4/36 and 18/8/36	30 Kp/cm ²	80 Kp/cm ²	J.C.D. with dates	
FUEL PIPES	Dates between 29/5/36 and 19/8/36	230 Kp/cm ²	1000 Kp/cm ²	J.C.D. with dates	
FUEL PUMPS	Dates between 25/5/36 and 5/6/36	230 Kp/cm ²	1000 Kp/cm ²	J.C.D. with dates	
SILENCER					
" WATER JACKET			head pressure 2.5 m.		
SEPARATE FUEL TANKS	13/10/36				

PLANS. Are approved plans forwarded herewith for shafting No. 4 December 1935 Receivers
(If not, state date of approval)

Separate Tanks

SPARE GEAR all spare gear as required in Section 9 of the Society's Rules for Heavy oil engines and their auxiliaries have been supplied.

The foregoing is a correct description,
F. Schichau G.m.b.H. Elbing

ppa.

i.v.

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1935. Sept 28, Nov 1. 8. 15. 22. 29. Dec 6. 10. 27. 1936. Jan 3. 11. 14. 16. 21. 24. Feb 7. 10. 18. 28. March 3. 6. 10. 13. 17. 20. 24. 27. 31.
During erection on board vessel - 1936. April 3. 8. 16. 21. 24. 29. May 8. 12. 15. 18. 22. 26. 28. June 5. 12. 15. 19. 26. 30. July 3. 7. 10. 14. 17. 21. 28. Aug. 3. 11. 18. 21. 25. Sept. 4. 11.
Total No. of visits 93.

Dates of Examination of principal parts—Cylinders 17/3/36 + 14/7/36 Covers 10/3/36 + 14/9/36 Pistons 10/1/36 + 25/5/36 Rods 27/3/36 15/5/36 Connecting rods 17-21/7/36
Crank shafts 15/6/36 Thrust shafts 15/6/36 Tunnel shafts 19-25/8/36 Screw shafts 20/7/36 Propellers 31/3/36 Stern tubes 15/6/36 Engine seatings 20/8/36
Engines holding down bolts 16/9/36 Completion of pumping arrangements 29/10/36 Engines tried under working conditions 5-7/11/36
Completion of fitting sea connections 12/8/36 Stern tubes 12/8/36 Screw shafts and propellers 12/8/36 744 H.B. 15/6/36
Material of crank shafts 745-747 H.B. 15/6/36 1437-1439 M.B. 9/3/36 Material of thrust shafts 745 H.B. 15/6/36 725 H.B. 15/6/36
Material of tunnel shafts 32-36 J.C.D. 19/8/36 45-47 J.C.D. 21/8/36 Material of screw shafts 11099 J.L. 20/7/36 Identification Marks on Do. 48-49 R.S. 25/9/36 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

✓

If so, state name of vessel

✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines have been built under Special Survey in accordance with the Society's Rules, the approved plans, and Secretary's letters. Material and workmanship are of good quality. The machinery has been tested under full working and manoeuvring conditions during sea trials giving entire satisfaction, and is eligible in my opinion to have record of + LMC 11.36 Oil Engines.

Special attention has been given to the capacity of the starting air receivers (as per Secretary's letter of the 27th November 1935). The capacity was found sufficient for twelve consecutive startings of each main engine.

The amount of Entry Fee ... £ 9 : 18 : When applied for,

Special ... £ 240 : 6 : 19

AIR RECEIVERS ... £ 13 : 18 : When received,

Travelling Expenses (if any) £ 47 : 0 : £ 230.14/- pd. 17/12/36

Committee's Minute

TUE. 22 DEC 1936

Assigned

+ dmb. 11.36
1 D.B. 100K
1 D.B. (WTS) 100K
old. Ch

FRI 5 MAR 1937

FRI 7 MAY 1937

FRI 6 AUG 1937

Richard Shaw.
Engineer Surveyor to Lloyd's Register of Shipping.

James C. Dykes
Surveyor to Lloyd's Register of Shipping

Lloyd's Register Foundation