

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-8 OCT 1936

Date of writing Report 25th Sept 1936 When handed in at Local Office 19 Port of BREMEN
 No. in Survey held at BREMEN Date, First Survey 17th Oct. 1935 Last Survey 7th Sept. 1936
 Reg. Book. 85086 on the STEELTWIN SC. TERJE VIKEN (Number of Visits 148) Gross 20638 Tons
 Net 13931
 Built at BREMEN By whom built DEUTSCHE SCHIFF- UND MASCHINENBAU A.G. WERK: A.G. WESER Yard No. 914 When built 1936
 Engines made at BREMEN By whom made DESCHIMBE, A.G. WESER Engine No. 2095/96 When made 1936
 Boilers made at BREMEN By whom made DESCHIMBE, A.G. WESER Boiler No. 1689-1694 When made 1936
 Registered Horse Power 1248 Owners UNITED WHALERS LTD. Port belonging to LONDON
 Non. Horse Power as per Rule 1248 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which Vessel is intended WHALING SERVICE

ENGINES, &c.—Description of Engines 2 TRIPLE EXPANSION STEAM ENG. WITH LP TURBINE D.R. 6. Revs. per minute 103
 Dia. of Cylinders 560 x 920 x 1480 Length of Stroke 1000 No. of Cylinders 2 x 3 No. of Cranks 2 x 3
 Crank shaft, dia. of journals as per Rule 320 Crank pin dia. 350 Crank webs Mid. length breadth shrunk Thickness parallel to axis 9.10
 as fitted 345 Mid. length thickness shrunk Thickness around eye-hole 1.55
 Intermediate Shafts, diameter as per Rule 305 Thrust shaft, diameter at collars as per Rule 320
 as fitted 347 as fitted 322
 Tube Shafts, diameter as per Rule 337 Screw Shaft, diameter as per Rule 350 Is the { tube } shaft fitted with a continuous liner { yes }
 as fitted 350 as fitted 350 Is the { screw } shaft fitted with a continuous liner { no }
 Bronze Liners, thickness in way of bushes as per Rule 18 Thickness between bushes as per Rule 13.5 Is the after end of the liner made watertight in the
 as fitted 23 as fitted 18 propeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length
 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 no
 If two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft no If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 1830
 Propeller, dia. 4650 Pitch 4250 No. of Blades 4 Material Hi. Steel whether Moveable no Total Developed Surface 6.93 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 18 Stroke 18 Can one be overhauled while the other is at work no
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 18 Stroke 18 Can one be overhauled while the other is at work no
 Feed Pumps { No. and size 3. 50 k/h 440 x 190 750 ; 1. 12 k/h 250 x 190 600 Pumps connected to the { No. and size One 305 x 325 400 130 k/h; One 280 x 360 675 250 k/h }
 { How driven Steam vert. simpl. } Main Bilge Line { How driven Steam vertic. simpl. }
 Ballast Pumps, No. and size One 280 x 360 675 250 k/h Lubricating Oil Pumps, including Spare Pump, No. and size 3, 190 x 190 300 40 k/h
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room In Eng Room 5 of 90 Z f, the elevated boiler room drains by 2 sumps of 50 Z f to engine room
 In Pump Room From Pump R. 1 of 125 Z, midship and in Hold, each Pump Room each 2 of 100 Z
Each from cargo holds 2 of 125 Z f
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 2 of 250 Z f Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size One of 150 Z f Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes
 Are all Sea Connections fitted direct on the skin of the ship yes, steel chest Are they fitted with Valves or Cocks valves & cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Overboard Discharges 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 the Blow Off Cocks fitted with a spigot and brass covering plate yes
 What Pipes pass through the bunkers none How are they protected no
 What pipes pass through the deep tanks none Have they been tested as per Rule no
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 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 yes Is the Shaft Tunnel watertight no tunnel Is it fitted with a watertight door yes worked from no

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 18000 sq. ft. 1674 m²
 Is Forced Draft fitted yes No. and Description of Boilers 6 multib. main boilers Working Pressure 250 lbs
IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? no
 Is the donkey boiler intended to be used for domestic purposes only no
PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers no Donkey Boilers no
 (If not/state date of approval)
 Superheaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes
 State the principal additional spare gear supplied

For Main Engines:	For Boilers:	For each of the princip. pumps:
2 1/2 bottom end & 4 1/2 top end bearings	21 plain & 24 key nuts	1 set of steam piston rings
1 LP piston rod, 1 guide shoe	2 safety valve springs	1 " " pump " "
1 LP slide valve spindle, 1 eccentric rod,	1 " " " " " "	1 " " suction valves
1 comp. eccentric strap	6 check valves	1 " " delivery valves
1 propeller shaft	For each size of main pumps:	
2 propellers	1 impeller wheel with shaft	
100 condenser nuts & formers	For each Dynamometer Engine:	
	1 HP & LP piston 1 piston rod	
	2 1/2 bottom end & 4 1/2 top end bearings	

The foregoing is a correct description, Deutsche Schiff- und Maschinenbau Aktiengesellschaft
 Werk: Act. Ges. "Weser"
 Manufacturer.



1410-16M

1935 ¹⁹³⁶
 Dates of Survey while building:

- During progress of work in shops:
 - 1935: Oct. 17, 19, 25, Feb. 4, 23, 29
 - 1936: Jan. 6, 11, 16, 22, 25, 27, 30, Feb. 3, 6, 8, 10, 13, 15, 20, 26, 29, Mar. 11, 19, 25, 27, 29
 - March: 2, 5, 9, 11, 13, 18, 19, 23, 25, 28, 30
 - April: 2, 4, 7, 9, 21, 23, 24, 27, 28, 29, 30
 - May: 2, 11, 12, 13, 14, 18, 20, 23, 25, 26, 27, 29, 4, 5, 6, 7, 8, 13, 15, 18, 19, 22, 25, 27, 28
 - June: 7, 4, 5, 8, 10, 12, 15, 17, 19, 28, 29, 29
 - July: 2, 4, 6, 8, 9, 10, 13, 14, 15, 16, 17, 20, 21, 28
- During erection on board vessel:
 - June: 2, 3, 5, 10, 11, 13, 17, 18, 20, 22, 24, 25, 27, 29
 - July: 1, 2, 4, 6, 8, 9, 13, 22, 24, 25, 27, 28, 29, 30
 - Aug.: 1, 3, 6, 8, 10, 12, 13, 15, 18, 20, 24, 26, 28, 29, 31
 - Sept.: 2, 7

 Total No. of visits: 148

Dates of Examination of principal parts:

- Cylinders: 27, 4, 29, 4, 13, 5, 36
- Slides: 30, 4, 36, 18, 5, 36
- Covers: 27, 4, 29, 4, 13, 5, 36
- Pistons: 20, 6, 36
- Piston Rods: 20, 6, 36
- Connecting rods: 23, 4, 36
- Crank shafts: 2, 4, 36
- Thrust shafts: 13, 5, 36, 22, 5, 36
- Intermediate shafts: 14, 5, 36
- Tube shaft: ✓
- Screw shafts: 25, 5, 36
- Propeller: 25, 5, 36
- Stern tube: 23, 3, 36, 25, 3, 36
- Engine and boiler seatings: 25, 5, 36
- Engines holding down bolts: 1, 7, 36
- Completion of fitting sea connections: 29, 5, 36, 7, 6, 36
- Completion of pumping arrangements: 26, 8, 36, 31, 8, 36
- Boilers fixed: 10, 8, 36
- Engines tried under steam: 31, 8, 36, 2, 9, 36
- Main boiler safety valves adjusted: 18, 8, 36, 20, 8, 36
- Thickness of adjusting washers: please see boiler report
- Crank shaft material: P.M. Steel
- Identification Mark: LLOYD'S MB 1174/13, 1763/65
- Thrust shaft material: P.M. Steel
- Identification Mark: LLOYD'S J.L. 1004/14, 21, 9, 35
- Intermediate shafts, material: P.M. Steel
- Identification Marks: LLOYD'S H.B. 15/16, 11, 12, 32
- Tube shaft, material: ✓
- Identification Mark: LLOYD'S J.L. 1017/20, 5, 12, 35
- Screw shaft material: P.M. Steel
- Identification Mark: LLOYD'S J.L. 10153/54, 29, 11, 35
- Steam Pipes, material: P.M. Steel
- Test pressure: 53 kg/cm²
- Date of Test: 13, 6, 36
- Is an installation fitted for burning oil fuel: yes
- Is the flash point of the oil to be used over 150°F: yes
- Have the requirements of the Rules for the use of oil as fuel been complied with: yes
- Is the vessel (not being an oil tanker) fitted for carrying oil as cargo: yes
- If so, have the requirements of the Rules been complied with: yes
- If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with: yes
- Is this machinery duplicate of a previous case: no
- If so, state name of vessel: ✓

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery has been tried under Special Survey in accordance with the approved plans, the Surveyor's letter and in conformity with the requirements of the Rules. The materials used in the construction are made at works recognized by the Committee and tested by the Soc. Surveyors. Materials and workmanship are of good quality. I attended on two trial trips of about 12 hours duration and all the machinery have been tested under full working and manœuvring condition, with and without turbines, and found satisfactory in all respects.*

This machinery is eligible in my opinion to be classed in the Soc. Reg. Book with record of: * LMC 9. 36. TRAIL SHAFTS C.L.

Certificate to be sent to **Surveyors Office**

The amount of Entry Fee ... RM 120.-
 Special ... £ 2624.-
 FITTING 156 PRESS Donkey Boiler Fee ... £ 448.-
 Travelling Expenses (if any) £ 148.-

A. Cartensen
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 16 OCT 1936**

Assigned + LMC 9. 36
 J.D.C.L.
 28 G.B. 60lb.



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