

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

1924

Received at London Office

WED. 5 MAR. 1924

Date of writing Report 7th Feb. 1924. When handed in at Local Office

19 Port of HAMBURG

No. in Survey held at TIEL.
Reg. Book.Date, First Survey 24th April, 1923. Last Survey 9th Feb. 1924.

(Number of Visits 30.)

on the Steer S. S. "FRIESLAND"

Built at TIEL By whom built Fried. Krupp Germaniawerft A.G. Yard No. 457.

Tons Gross 1544
Net 844.

Engines made at TIEL.

By whom made Fried. Krupp Germaniawerft A.G. Engine No. when made 1924.

Boilers made at TIEL.

By whom made Fried. Krupp Germaniawerft A.G. Boiler No. 3612/13 when made 1924.

Registered Horse Power

Owners Scheepvaart en Steenkolen Maats. Port belonging to ROTTERDAM.

Nom. Horse Power as per Rule 224.

Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

ENGINES, &c.—Description of Engines

One 3 cylinder triple expansion

Dia. of Cylinders 19 1/4", 32 1/4", 54 3/4" Length of Stroke 39 1/2" Revs. per minute 73 No. of Cylinders 3 No. of Cranks 3

Dia. of Crank shaft journals as per rule 273.3 mm. as fitted 278 mm. Dia. of Crank pin 278 mm. Crank webs Mid. length breadth 42.5 mm. Thickness parallel to axis 180 mm. Mid. length thickness 180 mm. If shrunk Thickness around eye-hole 133 mm.

Diameter of Thrust shaft under collars as per rule 273.3 mm. as fitted 278 mm. Diameter of Tunnel shaft as per rule 260.3 mm. as fitted 265 mm. Diameter of Screw shaft as per rule 301 mm. as fitted 310 mm. Is the Screw shaft as fitted 310 mm. 6 280 mm.

fitted with a continuous liner the whole length of the stern tube no. 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. 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 appliance fitted at the after end of the shaft to permit

of it being efficiently lubricated yes. Length of Stern Bush 2105 mm. Diameter of Propeller 4100 mm.

Pitch of Propeller 4850 mm. No. of Blades 4. State whether Moveable no. Total Surface 5 sq. m. square feet.

No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 85 mm. Stroke 560 mm. Can one be overhauled while the other is at work yes.

No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 85 mm. Stroke 560 mm. Can one be overhauled while the other is at work yes.

Total number and size of power driven Feed and Bilge Auxiliary Pumps 2. 1 1/2" 250 x 180 x 450 mm. 1. 1 1/2" 250 x 180 x 450 mm. 1. 1 1/2" 250 x 180 x 450 mm.

No. and size of Pumps connected to the Main Bilge Line 5 - 2 each of 85 mm. Dia. 560 mm. Stroke 560 mm. 1 duplex 190 x 130 x 200 mm. 1 duplex 230 x 280 x 350 mm. also

No. and size of Ballast Pumps 1 duplex 230 x 280 x 350 mm. No. and size of Lubricating Oil Pumps, including Spare Pump 1 Donkey Pump.

Are two independent means arranged for circulating water through the Oil Cooler no. No. and size of suction connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room 4 - 3 each of 77 mm. - 1 of 90 mm. and in Holds, &c. 4 each of 77 mm. From tanks:

1 from fore peak of 100 mm. - 12 from tanks each of 125 mm. 1 from after peak of 100 mm. inside diameter.

No. and size of Main Water Circulating Pump Bilge Suctions 1 of 150 mm. No. and size of Donkey Pump Direct Suctions

to the Engine Room Bilges 1 - 90 mm. 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 connections with the sea direct on the skin of the ship yes. Are they Valves or Cocks valve & cock.

Are they sized sufficiently high on the ship's side to be seen without lifting the stokehold 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 the Blow Off Cocks fitted with a spigot and brass covering plate yes.

What Pipes are carried through the bunkers none. How are they protected 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 Screw Shaft Tunnel watertight machinery aft. Is it fitted with a watertight door 3672 mm. worked from 340 sq. m.

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 340 sq. m.

Is Forced Draft fitted no. No. and Description of Boilers 2 single ended multitubular Working Pressure 13 kg. (185 lb.)

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes.

IS A DONKEY BOILER FITTED? no. If so, is a report now forwarded? no.

PLANS. Are approved plans forwarded herewith for Shafting yes. Main Boilers yes. Auxiliary Boilers no. Donkey Boilers no.

General Pumping Arrangements yes. Oil and Burning Piping Arrangements no.

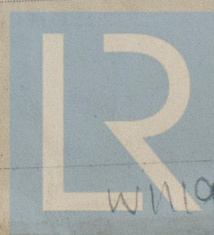
SPARE GEAR. State the articles supplied:—All spare articles required in Section 37, page 87 of the

Rules have been supplied.

The foregoing is a correct description,

FRIED. KRUPP
GERMANIAWERFT
Aktiengesellschaft

Manufacturer.



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Lloyd's Register
Foundation

During progress of work in shops -- 24/4-15/5-13/6-26/6-17/7-24/7-24/8-15/9-18/9-24/9-2/10-9/10-17/10-23/10-30/10-5/11-17/11
During erection on board vessel -- 4/1-15/1-18/1-22/1-28/1-31/1-5/2/24
Total No. of visits 30.

Dates of Examination of principal parts - Cylinders 24/4-15/5-26/6-24/8-24/9/23. Slides 26/6-24/8-24/9/23.
Covers 26/6-24/9/23. Pistons 9/10-17/10-30/10/23. Rods 15/5-9/10-17/10-30/10/23.
Connecting rods 13/6-9/10-17/10/23. Crank shaft 24/7-24/8-2/10/23. Thrust shaft 24/8-3/10-2/10/23.
Tunnel shafts 24/7-24/8-2/10/23. Screw shaft 24/7-24/8-2/10/23. Propeller 2/10/23.
Stern tube 2/10/23. Engine and boiler seatings 5/11-17/11/23. Engines holding down bolts 18/1/24.
Completion of pumping arrangements 28/1/24. Boilers fixed 4/1/24. Engines tried under steam 3/1/24.
Completion of fitting sea connections 11/12/23. Stern tube 11/12/23. Screw shaft and propeller 11/12/23.
Main boiler safety valves adjusted 3/1/24. Thickness of adjusting washers Port: 22 1/2. Star: 21 1/2. Port: 25 1/2. Star: 20 1/2.
Material of Crank shaft Steel. Identification Mark on Do. No 3456-3457-3438 F.W. 2.10.23.
Material of Thrust shaft Steel. Identification Mark on Do. No 3465. F.W. 2.10.23.
Material of Tunnel shafts Steel. Identification Marks on Do. No 3463 - F.W. 2.10.23.
Material of Screw shafts Steel. Identification Marks on Do. No 3460. Spare No 3461. F.W. 2.10.23.
Material of Steam Pipes Steel. Test pressure 39 kg/cm. Date of Test 28/12/23.
Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150°F.
Have the requirements of the Rules for carrying and burning oil fuel been complied with.
Is this machinery duplicate of a previous case yes. If so, state name of vessel. "ZEELAND"

General Remarks (State quality of workmanship, opinions as to class, &c.)
Material and workmanship of engine and boiler are of good quality, the outfit is ample. The material used for the construction has been made at works approved by the Society and tested in conformity with the requirements of the Rules. Engine and boiler have been constructed in accordance with the approved plans, and the Secretary's letters of 19/1/23 - 30/1/23 - 18/6/23 and otherwise in conformity with the requirements of the Rules.
The machinery having been tested under full working and manœuvring conditions on trial trip to my entire satisfaction is eligible in my opinion to have notification of L.M.C. - 1.24. Tail shaft without liner. O.G.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 2.24. O.G.

5/3/24

Friedrich Hill
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 4 : 0 :
Special ... £ 56 : 0 :
Donkey Boiler Fee ... £ 6 :
Travelling Expenses (if any) £ 15 : 0 :
When applied for, 20.4 Feb. 24.
When received, 7.4.24.

Committee's Minute
Assigned
FRI. MAR 7 1924
+ L.M.C. 2.24
O.G.

