

REPORT ON MACHINERY.

No. 32518

Date of writing Report 5/3/21 When handed in at Local Office 5/3/21 Port of Oslo Received at London Office FRI. 18 MAR. 1921
 No. in Survey held at Oslo Date, First Survey 13/7/20 Last Survey 3/3/1921
 Reg. Book. on the S.S. "FÆDRELAND" (Number of Visits 35)

Master _____ Built at Oslo By whom built Rune H. & Co. Ltd. Tons { Gross 1134
 Engines made at Oslo By whom made Gaarder H. & Co. Ltd. Net 585
 Boilers made at do By whom made do No. A256 When built 1921
 Registered Horse Power _____ Owners J. Halvorsen when made 1921
 Nom. Horse Power as per Section 28 160 Is Refrigerating Machinery fitted for cargo purposes No when made 1921
 Port belonging to Bergen

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 18-29-50 Length of Stroke 33 Revs. per minute _____ Dia. of Screw shaft as per rule 11.37 Material of Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes as fitted 10.7 screw shaft
 in the propeller boss Yes If the liner is in more than one length are the joints burned _____ Is the after end of the liner made water tight
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive _____ If the liner does not fit tightly at the part
 liners are fitted, is the shaft lapped or protected between the liners _____ If two
 Dia. of Tunnel shaft as per rule 8.96 Dia. of Crank shaft journals as per rule 9.3 9.42 Length of stern bush 3-7
 as fitted 9.8 Dia. of Crank pin 9.7 Size of Crank webs 15x6.5 Dia. of thrust shaft under
 collars 9.7 Dia. of screw 13-0 Pitch of Screw 13-3 No. of Blades 4 State whether moveable No Total surface 48 sq
 No. of Feed pumps Two Diameter of ditto 3 Stroke 20 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 3 Stroke 20 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6x4x6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 @ 2 1/2" dia BALLAST 7x8x8 In Holds, &c. 4 @ 2 1/2" dia.

No. of Bilge Injections one sizes 4 1/2 Connected to condenser, or to circulating pump Chap Is a separate Donkey Suction fitted in Engine room & size Yes, 1 1/2
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible _____
 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 stokehold plates Yes Are the Discharge Pipes above below the deep water line Yes
 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 _____
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings 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 Eng room gratings

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel J. Spencer & Sons Ltd
 Total Heating Surface of Boilers 2520 sq Is Forced Draft fitted No No. and Description of Boilers 2 S.E. Smith
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 16-9-20 No. of Certificate 3450
 Can each boiler be worked separately Yes Area of fire grate in each boiler 36.5 sq No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 3.97 Pressure to which they are adjusted 185 lb/sq Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 11" to bunkers Mean dia. of boilers 12-0 Length 10-8 Material of shell plates Steel
 Thickness 1" Range of tensile strength 28 to 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams JRL
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 7 1/8 Lap of plates or width of butt straps 1-3 1/2
 Per centages of strength of longitudinal joint rivets 86% Working pressure of shell by rules 183 Size of manhole in shell 16x12
 plate 86% No. and Description of Furnaces in each boiler 2 Plain Material Steel Outside diameter 41 1/8
 Length of plain part top 38.5 Thickness of plates crown 3 1/2 Description of longitudinal joint Welded No. of strengthening rings _____
 bottom 26.5 bottom 3 1/2 Working pressure of furnace by the rules 185 Combustion chamber plates: Material Steel Thickness: Sides 4 1/8 Back 4 1/8 Top 2 1/2 Bottom 4 1/8
 Working pressure of furnace by the rules 185 Pitch of stays to ditto: Sides 10 1/2 x 7 1/2 Back 10 x 8 1/2 Top 14 x 8 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 186 lb/sq
 Material of stays Steel Area at smallest part 1.76 Area supported by each stay 87.5 Working pressure by rules 181 lb/sq
 Material Steel Thickness 1 1/8 Pitch of stays 17 1/2 x 15 1/2 How are stays secured J.R.S.W. Working pressure by rules 185 lb/sq Material of stays Steel
 Area at smallest part 5.18 Area supported by each stay 271 Working pressure by rules 198 Material of Front plates at bottom Steel
 Thickness 3 1/2 Material of Lower back plate Steel Thickness 1 1/8 Greatest pitch of stays 14 x 8 1/2 Working pressure of plate by rules 193
 Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 5 Material of tube plates Steel Thickness: Front 3 1/2 Back 5 Mean pitch of stays 9.75
 Pitch across wide water spaces 14 Working pressures by rules 182 lb/sq Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 x 1 1/2 Length as per rule 32 1/2 Distance apart 8 1/2 Number and pitch of stays in each 3 @ 7 1/2
 Working pressure by rules 187 lb/sq Steam dome: description of joint to shell _____
 Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____
 Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

UPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____
 Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____
 Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 connecting rod top end, 2 connecting rod bottom end, 2 main bearing, 1 set coupling bolts & nuts, 1 set feed & 1 set bilge pump valves, 3 condenser tubes & 20 ferrules, 6 junk ring studs, 1 set air pump valves, 1 set circulating pump valves, fire bar for air furnace, 1 main & 1 aux feed check valve, 8 boiler tubes, 8 stay nuts, 1 safety valve spring, 1 cast iron propeller, a quantity of assorted bolts & nuts & inch of various sizes.

The foregoing is a correct description,

FOR EARLE'S
SHIPBUILDING & ENGINEERING CO. L'IMITED

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920. Jul 15, 16, 22, Aug 4, 17, Sept 6, 7, 8, 9, 13, 15, 16, 21, 22 Oct 4, 5, 13, 27, 29
During erection on board vessel --- Nov 2, 3, 15, 16, 17, 23, 29, Dec 2, 6, 8, 11, Jan 4, 26, Mar 1, 3
Total No. of visits 35

Is the approved plan of main boiler forwarded herewith Yes

Is the approved plan of main boiler forwarded herewith Yes

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 9/9/20 Slides 4/10/20 Covers 9/9/20 Pistons 4/10/20 Rods 9/9/20
Connecting rods 15/9/20 Crank shaft 3/4/20 Thrust shaft 2/14/20 Tunnel shafts 2/14/20 Screw shaft 3/14/20 Propeller 3/14/20
Stern tube 3/11/20 Steam pipes tested 29/10/20 Engine and boiler seatings 6/12/20 Engines holding down bolts 6/12/20
Completion of pumping arrangements 3/3/21 Boilers fixed 3/3/21 Engines tried under steam 3/3/21
Completion of fitting sea connections 6/12/20 Stern tube 6/12/20 Screw shaft and propeller 26/11/21
Main boiler safety valves adjusted 1/3/21 Thickness of adjusting washers 7/5" 5/8" 5/8" 5/8"
Material of Crank shaft Steel Identification Mark on Do. 3295 Material of Thrust shaft Steel Identification Mark on Do. 2512
Material of Tunnel shafts Steel Identification Marks on Do. 2513 Material of Screw shafts Steel Identification Marks on Do. 2511
Material of Steam Pipes Copper Test pressure 360 lbs.

Is an installation fitted for burning oil fuel No

Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of Section 49 of the Rules 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. The engines & boiler of this vessel have been built under Special Survey and the materials & workmanship are good. On completion they were examined while running full power trials at sea & found satisfactory. The machinery throughout is now in good & efficient condition & eligible in my opinion to have the word L.M.C. 3-21 marked in Red in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 3. 21. CL

Roll
22/3/21 J.P.R.

The amount of Entry Fee ... £ 3-0-0
Special ... £ 40-0-0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 17/3/1921
When received, 24.3.1921

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

17th MAR. 24 1921

Assigned

+ L.M.C. 3. 21
C. L.

CERTIFICATE WRITTEN



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Lloyd's Register Foundation

Null

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.