

REPORT ON MACHINERY.

No. 28399

Received at London Office SAT. 19 AUG. 1922

4. Writing Report 19 When handed in at Local Office 18 AUG 1922 Port of SUNDERLAND.

Survey held at SUNDERLAND. Date, First Survey 25th November 1920 Last Survey 14th August 1922.

Book. on the new steel S/S "IRENE MARIA". (Number of Visits 6.)

Builder Built at Hoboken By whom built Antwerp Engineering Co. (S/S N° 79) When built 1922

Machinery made at Sunderland By whom made N.E. Marine Engineering Co. Ld. (N° 2477) when made 1922

Engines made at Sunderland By whom made N.E. Marine Engineering Co. Ld. (N° 2477) when made 1922

Registered Horse Power Owners Port belonging to

Horse Power as per Section 28 213 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Engines, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

of Cylinders 20, 33, 54 Length of Stroke 36 Revs. per minute Dia. of Screw shaft as per rule 11.38" Material of screw shaft as fitted 11.5/8" (scrap iron)

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 water tight

Is 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

When the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If two

are fitted, is the shaft lapped or protected between the liners Length of stern bush 3.10 1/2"

Dia. of Tunnel shaft as per rule 9.93" Dia. of Crank shaft journals as per rule 10.427" Dia. of Crank pin 10 5/8" Size of Crank webs 16 x 6 1/2" Dia. of thrust shaft under

as fitted 10 1/8" Dia. of screw 14.3" Pitch of Screw 13.9" No. of Blades 4 State whether moveable no Total surface 65 sq ft

of Feed pumps 2 Diameter of ditto 3" Stroke 1.9" Can one be overhauled while the other is at work yes

of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 1.9" Can one be overhauled while the other is at work yes

of Donkey Engines 2 Sizes of Pumps 6 3/4 x 6, 7 1/8 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room In Holds, &c.

of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Are all pipes carried through the bunkers

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

MANUFACTURERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons Ld.

Total Heating Surface of Boilers 36320 sq ft Is Forced Draft fitted no No. and Description of Boilers Two single ended marine

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 9-8-22 No. of Certificate 3805

Can each boiler be worked separately Area of fire grate in each boiler 460 sq ft No. and Description of Safety Valves to

each boiler Two dried spring Area of each valve 4.90" Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Ind. Mean dia. of boilers 14.0" Length 10.6" Material of shell plates steel

Thickness 15 1/2" Range of tensile strength 29-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.

Long. seams 19 B.S. TR Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9 3/4" Top of plates or width of butt straps 19 1/2"

Percentages of strength of longitudinal joint rivets 86.8 Working pressure of shell by rules 182 Size of manhole in end 16" x 12"

Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 3.4 1/2"

Length of plain part top bottom Thickness of plates crown bottom 3 1/2 Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 187 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 25/32" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9 1/4" x 10 1/4" Back 11 9/16" x 10" Top 9 3/4" x 9 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181

Material of stays steel Area at smallest part 2.030" Area supported by each stay 950" Working pressure by rules 192 End plates in steam space:

Material steel Thickness 15 1/16" Pitch of stays 24 1/2" x 17 1/2" How are stays secured B.N. & W Working pressure by rules 180 Material of stays steel

Area at smallest part 7.660" Area supported by each stay 4300" Working pressure by rules 186 Material of Front plates at bottom steel

Thickness 13/16" Material of Lower back plate steel Thickness 15/16" Greatest pitch of stays 15 3/8" x 10" Working pressure of plate by rules 181

Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 3/4" Material of tube plates steel Thickness: Front 13/16" Back 3/4" Mean pitch of stays 11 5/8"

Pitch across wide water spaces 15" (11/16" B.P.) Working pressures by rules 182 Girders to Chamber tops: Material steel Depth and

Thickness of girder at centre 2 @ 8" x 7 1/8" Length as per rule 2.6 1/2" Distance apart 9 3/4" Number and pitch of stays in each 2 @ 9 1/2"

Working pressure by rules 188 Steam dome: description of joint to shell none % of strength of joint

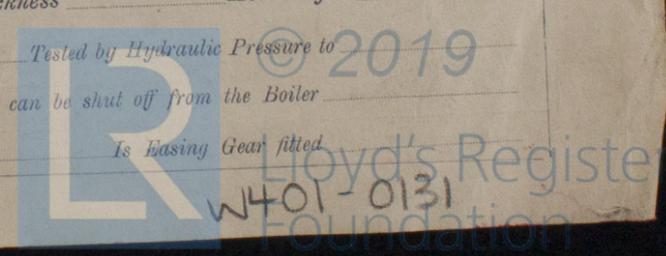
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. 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:—

The foregoing is a correct description,
FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

C. T. Adams.

Manufacturer.

Manager.

Dates of Survey while building { During progress of work in shops -- } ~~1921~~ 1920. Nov. 25. 1921. Feb. 25. Mar. 14. 1922. Apr. 24. May 25. ^{June 16. 19.} July 14. 18. 20. 22. Aug. 14. 9. 10. 17.
{ During erection on board vessel -- }
Total No. of visits 16.

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 4-8-22 Slides 17-8-22 Covers 4-8-22 Pistons 10-8-22 Rods 10-8-22

Connecting rods 1-8-22 Crank shaft 1-8-22 Thrust shaft 1-8-22 Tunnel shafts 17-8-22 Screw shaft 20-7-22 Propeller 20-7-22

Stern tube 20-7-22 Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections Stern tube Screw shaft and propeller

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft Steel Identification Mark on Do. 5122 LCO Material of Thrust shaft Steel Identification Mark on Do. 5122 LCO

Material of Tunnel shafts Snip Iron Identification Marks on Do. 5180 LCO Material of Screw shafts Snip Iron Identification Marks on Do. 5180 LCO

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case yes If so, state name of vessel "Stenies" Sld Rpt. N° 28054

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

The materials and workmanship are good
The machinery has been constructed under special survey and is being sent to Antwerp to be fitted in the vessel.

SUNDERLAND

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

The amount of Entry Fee ... £ 4 : :
Special ... £ 42 : 12 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for. 18 AUG 1922
When received. 30-8-1922
(p. l. v. l. t.) / N. 7

L. C. Davis.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 11 E. 31 OCT. 1922
Assigned