

REPORT ON MACHINERY.

No. 83492

Received at London Office 10 DEC 1920

Date of writing Report 10 DEC 1920 When handed in at Local Office 10 DEC 1920 Port of London
No. in Survey held at London Date, First Survey Oct. 22nd 1920 Last Survey 4th Dec. 1920
Reg. Book. 75163 on the S.S. "Hughli" or "Valencia" (Number of Visits 9)

Master Built at Rostock By whom built ART. Soc. Neptune Tons Gross Net When built 1913

Engines made at Rostock By whom made Neptune & Co when made 1913
Boilers made at do By whom made do when made 1913

Registered Horse Power Owners Port belonging to
Nom. Horse Power as per Section 28 516 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

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

Dia. of Cylinders 28¹⁵/₁₆, 46⁵/₈, 76³/₄ Length of Stroke 48 Revs. per minute Dia. of Screw shaft as per rule 15.3 Material of screw shaft as fitted 1-3 3/4

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 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 Length of stern bush 5-5 1/4

Dia. of Tunnel shaft as per rule 3.61 Dia. of Crank shaft journals as per rule 3.80 Dia. of Crank pin 378 Size of Crank webs Dia. of thrust shaft under collars 378 Dia. of screw 52100 Pitch of Screw 1995 No. of Blades 4 State whether moveable Yes Total surface

No. of Feed pumps 2 Diameter of ditto 17.8 Stroke 260 Can one be overhauled while the other is at work Wain's Type
No. of Bilge pumps 2 Diameter of ditto 12.5 Stroke 610 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 4 Sizes of Pumps 250, 165, 250, 260, 310 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2 4" In Holds, &c. 2 each hold - 4"

No. of Bilge Injections 1 sizes 7" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes - 4"

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 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

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 Top gratings

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 7025[#] Is Forced Draft fitted Yes No. and Description of Boilers Three Single Ended
Working Pressure 190 lbs Tested by hydraulic pressure to 290 lbs Date of test 27/11/21 No. of Certificate

Can each boiler be worked separately Yes Area of fire grate in each boiler 49.5[#] No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 89.2[#] Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 4300 Length 3710 Material of shell plates steel
Thickness 3.15 Range of tensile strength 43,000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams T.R.L.

long. seams T.R.L. Diameter of rivet holes in long. seams 35[#] Pitch of rivets 452[#] Lap of plates or width of butt straps Separated
Per centages of strength of longitudinal joint rivets 109.2[#] take 85% plate 92.2 Working pressure of shell by rules 199 lbs Size of manhole in shell 400 x 300[#]

Size of compensating ring 200 x 31.5 No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 1050

Length of plain part top Thickness of plates crown 15[#] Description of longitudinal joint weld No. of strengthening rings
bottom Thickness of plates bottom 22[#]

Working pressure of furnace by the rules 228 Combustion chamber plates: Material steel Thickness: Sides 16.5 Back 16.5 Top 16.5 Bottom 22.0

Pitch of stays to ditto: Sides 200 x 190 Back 200 x 200 Top 180 x 190 If stays are fitted with nuts or riveted heads None Working pressure by rules 250 lbs

Material of stays steel Area at smallest part 3.8 Area supported by each stay 200 x 190 Working pressure by rules 271 lbs End plates in steam space:

Material steel Thickness 27.5 Pitch of stays 360 x 440 How are stays secured 2.2[#] Working pressure by rules 216 lbs Material of stays steel

Area at smallest part 70[#] Area supported by each stay 360 x 440 Working pressure by rules 229 lbs Material of Front plates at bottom steel

Thickness 26.5 Material of Lower back plate steel Thickness 24 Greatest pitch of stays 320 Working pressure of plate by rules 230

Diameter of tubes 3 1/4 Pitch of tubes 114 Material of tube plates steel Thickness: Front 26.5 Back 26 Mean pitch of stays 9"

Pitch across wide water spaces 360 Working pressures by rules 206 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 220 x 19 x 2 Length as per rule 840 Distance apart 180 Number and pitch of stays in each 3 - 190

Working pressure by rules 196 lbs 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

26 SUPERHEATER. Type Smiths Date of Approval of Plan Tested by Hydraulic Pressure to Headers 1000 lbs

Date of Test Brand 7 Trade Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 2" Pressure to which each is adjusted 190 lbs Is Easing Gear fitted Yes

W 221-0109.3
Lloyd's Register Foundation

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *—*

SPARE GEAR. State the articles supplied:— *Two top end bolts, two bottom end bolts, 2 main bearing bolts, set of coupling bolts, tail shaft, 3 crank shaft, propeller blade a set of studs & nuts, eccentric strap, valve spindle, air pump rod, air pump impeller, jr. top end brasses, jr. bottom end brasses, assorted iron, bolts etc. Also feed & bilge pump valves.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - - }
Total No. of visits

Is the ^{plan} approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " " *—*

Dates of Examination of principal parts—Cylinders *9/11/20* Slides *9/11/20* Covers *9/11/20* Pistons *9/11/20* Rods *9/11/20*
Connecting rods *9/11/20* Crank shaft *9/11/20* Thrust shaft *9/11/20* Tunnel shafts *9/11/20* Screw shaft *2/11/20* Propeller *2/11/20*
Stern tube *2/11/20* Steam pipes tested *B.H.T.* Engine and boiler seatings *9/11/20* Engines holding down bolts *9/11/20*
Completion of pumping arrangements *27/11/20* Boilers fixed *27/11/20* Engines tried under steam *4/12/20*
Completion of fitting sea connections *2/11/20* Stern tube *2/11/20* Screw shaft and propeller *2/11/20*
Main boiler safety valves adjusted *4/12/20* Thickness of adjusting washers

Material of Crank shaft *slut* Identification Mark on Do. *—* Material of Thrust shaft *slut* Identification Mark on Do. *—*

Material of Tunnel shafts *slut* Identification Marks on Do. *—* Material of Screw shafts *slut* Identification Marks on Do. *—*

Material of Steam Pipes *Slut* Test pressure *500 lbs*

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 Section 49 of the Rules been complied with *—*

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.)

The machinery of this vessel was not constructed under this Society's survey but it has been opened up & carefully examined. The principal dimensions have been verified.

The machinery of this vessel is in good order & eligible in my opinion to have record L.M.C. 12, 20 in the Register Book. Tail shaft 12, 20.

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

The amount of Entry Fee ... £ : : When applied for, *13/12/20*
Special, ... £ *30 : 0* *H. Bawson-Smith & Frederick Stephens*
Donkey Boiler Fee ... £ : : When received, *Engineer Surveyor to Lloyd's Register of Shipping.*
Travelling Expenses (if any) £ : : *14.12.20 JMW*

Committee's Minute *TUE. DEC. 14 1920*
Assigned *MACHINERY DEPT. L.M.C. 12.20*
L.D.