

REPORT ON MACHINERY.

No. 74018

Received at London Office SAT 15 JAN 1921

Port of NEWCASTLE-ON-TYNE

Date of writing Report 14 January 1921 When handed in at Local Office 14 JAN 1921 Date, First Survey 6 December 1920 Last Survey 8 January 1921

o. in Survey held at South Shields Reg. Book. on the Steel screw steamer "Gremier". Ex "Augsburg"

Built at Hensburg By whom built Hensburger Schiffsb. Ges. Tons Gross 8127 Net 5061 When built 1916

Engines made at Hensburg By whom made Hensburger Schiffsb. Ges. when made 1916

Boilers made at Hensburg By whom made Hensburger Schiffsb. Ges. when made 1915

Registered Horse Power 804 Owners Hains B. B. & Co. Port belonging to St. Jves.

Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

No. of Cylinders Three No. of Cranks Three

DIA. OF CYLINDERS 32 1/2 - 53 - 86 1/2 Length of Stroke 55 Revs. per minute 70 Dia. of Screw shaft as per rule 17 1/2 as fitted 18 1/2 Material of screw shaft Steel

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 Yes 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 Yes Length of stern bush 6 1/2

liners are fitted, is the shaft lapped or protected between the liners

DIA. OF TUNNEL SHAFT as per rule 16 1/4 as fitted 16 1/2 Dia. of Crank shaft journals as per rule 17 1/2 as fitted 17 1/2 Dia. of Crank pin 18 1/2 Size of Crank webs 29 1/2 x 11 1/2 Dia. of thrust shaft under

collars 17 1/2 Dia. of screw 19 1/2 Pitch of Screw 17 1/2 No. of Blades 4 State whether moveable Yes Total surface 106 3/4

No. of Feed pumps Two Diameter of ditto 4 1/2 Stroke 27 1/2 Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two Diameter of ditto 5 1/2 Stroke 27 1/2 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Centrifugal Suction of Pumps 4 Heirs and 1 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 1 - 5 1/2 inch - 4 - 3 1/2 inch In Holds, &c. No. 1 Hold 2 - 3 1/2 inch, No. 2 Hold 2 - 3 1/2 inch, No. 3 Hold 2 - 3 1/2 inch

No. of Bilge Injections 6 sizes 8 1/2 inch Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 5 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 Yes

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 & 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 are carried through the bunkers None How are they protected Yes

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 Engine Room Top Platform

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

Total Heating Surface of Boilers 11540 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 4 S.E. Cylindrical multitubular

Working Pressure 205 lb Tested by hydraulic pressure to Yes Date of test Yes No. of Certificate Yes

Can each boiler be worked separately Yes Area of fire grate in each boiler 61 1/2 sq ft No. and Description of Safety Valves to

each boiler 2 Direct spring loaded Area of each valve 12 1/2 sq in Pressure to which they are adjusted 205 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2 1/2 6 inch Inside Mean dia. of boilers 15 1/2 9 inch Length 12 1/2 2 1/2 Material of shell plates Steel

Thickness 1 1/2 11/32 Range of tensile strength 29 1/2 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams A. R.

long. seams A. B. S. Diameter of rivet holes in long. seams 1 1/8 inch Pitch of rivets 2 1/2 10 3/4 1/2 1/2 Imp. of plates on width of butt straps 30 1/2 Extreme

Per centages of strength of longitudinal joint rivets 113% plate 92 1/2% Working pressure of shell by rules 212 1/4 4 lb Size of manhole in shell 12 1/2 x 16 1/2

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 For Material Steel Outside diameter 45 1/2

Length of plain part 10 ft Thickness of plates crown 32 bottom 32 Description of longitudinal joint Welded No. of strengthening rings None

Working pressure of furnace by the rules 236 1/4 Combustion chamber plates: Material Steel Thickness: Sides 11/16 Back 3/32 Top 11/16 Bottom 1

Pitch of stays to ditto: Sides 7 1/8 x 7 1/8 Back 7 1/8 x 7 1/8 Top 7 1/8 x 7 1/8 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 252 1/4

Material of stays Steel Area at smallest part 1 1/2 x 1 1/2 Area supported by each stay 59 sq in Working pressure by rules 238 1/4 Material of stays Steel

Material Steel Thickness 1 1/2 Pitch of stays 15 x 15 How are stays secured A. Nuts Working pressure by rules 327 1/4 Material of Front plates at bottom Steel

Area at smallest part 7 1/2 sq in Area supported by each stay 225 sq in Working pressure of plate by rules 223 1/4

Thickness 1 1/2 Material of Lower back plate Steel Thickness 5/8 Greatest pitch of stays 14 1/2 Working pressure of plate by rules 223 1/4

Diameter of tubes 3 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 1 1/2 Back 3/4 Girders to Chamber tops: Material Steel Depth and

Pitch across wide water spaces 14 Working pressures by rules 222 1/4 400 Distance apart 7 1/2 Number and pitch of stays in each 3 - 7 1/8

thickness of girder at centre 10 x 1 1/2 Length as per rule 35 % of strength of joint Yes

Working pressure by rules 224 1/4 Steam dome: description of joint to shell Yes Diam. of rivet holes Yes

Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Thickness Yes How stayed Yes

Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Tested by Hydraulic Pressure to Yes

SUPERHEATER. Type Schmidt Date of Approval of Plan Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Date of Test

Diameter of Safety Valve 2

Pressure to which each is adjusted 210 lb

Is Easing Gear fitted Yes

Lloyd's Register Foundation

IS A DONKEY BOILER FITTED?

no.

If so, is a report now forwarded?

✓

SPARE GEAR.

State the articles supplied:— 4. Connecting rod top end bolts & nuts. 2 Connecting rod bottom end bolts & nuts. 2 main bearing bolts. 1 set of Coupling bolts & nuts. 1 set of feed & bilge pump valves. 1 set of HP & MP piston rings. 1 Crank shaft. 1 pair of bottom end brasses. 2 pair of top end brasses. 1 piston rod. 1 set of front & back cross link brasses. 1 air pump rod. 1 HP & 1 MP piston slide valves. 2 slide valve spindles. 1 radial link block. 2 eccentric sheaves & straps. 1 set of piston and slide valve rod. metallic packing. 1 set of main & aux. feed check valves. 50 Condenser tubes. 100 boiler tubes. spare parts for all auxiliary machinery. 100 junk ring bolts. 6 cylinder cover studs & valve chest studs. a quantity of assorted bolts & nuts & Iron of various sizes.

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 approved plan of main boiler forwarded herewith

no.

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 8-12-20 Slides 8-12-20 Covers 8-12-20 Pistons 8-12-20 Rods 8-12-20

Connecting rods 8-12-20 Crank shaft 8-12-20 Thrust shaft 8-12-20 Tunnel shafts 8-12-20 Screw shaft 8-12-20 Propeller 8-12-20

Stern tube 8-12-20 Steam pipes tested - Engine and boiler seatings 9-12-20 Engines holding down bolts 8-12-20

Completion of pumping arrangements Examination 6-1-21 Boilers fixed ✓ Engines tried under steam 6-1-21.

Completion of fitting sea connections 7-12-20 Stern tube ✓ Screw shaft and propeller 14-12-20.

Main boiler safety valves adjusted 30-12-20 Thickness of adjusting washers PV 1/2" SV 1/2" PV 1/2" SV 1/2" PV 1/2" SV 1/2" PV 1/2" SV 1/2"

Material of Crank shaft Steel Identification Mark on Do. ✓ Material of Thrust shaft Steel Identification Mark on Do. ✓

Material of Tunnel shafts Steel Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. ✓

Material of Steam Pipes Steel Test pressure ✓

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 and boilers of this vessel were built under the supervision of the Germanischer Lloyd's Society.

The scantlings of the boilers are in accordance to the plan approved by Lloyd's Register of Shipping on the 13th December 1920. The vessel was placed in Messrs Middle Dock & Dry Dock and the following examined:

The screw shaft, stern bush, propeller, sea connections and all outside fastenings, the cylinders, pistons, slides, casings, crank, thrust and tunnel shafting, and all bearings, the condenser, air, circulating, feed, and bilge pumps, all auxiliary machinery and found or placed in good order.

The main boilers with their mountings, safety valves, superheaters, doors and fastenings were examined and found or placed in good order.

The scantlings of the engines and boilers were checked and found to comply generally with the Society's rules.

The main steam pipes (steel) were examined in place and found in good order.

The main and auxiliary machinery were tried under steam and the main boiler and superheater safety valves, adjusted under steam to 205 & 210 lb respectively.

The machinery throughout is now in good and safe working condition and eligible in our opinion to have the record of L.M.C. 1-21 marked in the Society's Register Book.

The amount of Entry Fee ... £

Special ... £ 50.00

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

When received,

10-2-1921

H. Hindale & Wm R. Austin

Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE JAN. 25 1921

L.M.C. 1-21

F.D.

CERTIFICATE WRITTEN



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