

REPORT ON MACHINERY.

No. 44180.

Date of writing Report *1st March 1921* When handed in at Local Office *3rd March 1921* Port of *NEWCASTLE-ON-TYNE*
 No. in Survey held at *South Shields* Date, First Survey *27th January* Last Survey *1st March 1921*
 Reg. Book. *64419* on the *Steel Screw Steamer "Presithney" Ex. S/S "Lippe"* (Number of Visits *114*)
 Master *By whom built* *Hensburger Schiffsbau Ges.* Tons *Gross*
 Built at *Hensburg* By whom made *Hensb. Schiffsb. Ges.* When built *1914*
 Engines made at *Hensburg* By whom made *Hensb. Schiffsb. Ges.* when made *1914*
 Boilers made at *Do.* By whom made *Do.* when made *1914*
 Registered Horse Power *Owners* *Hain S. S. Co. Ltd.* Port belonging to *St. Javes.*
 Nom. Horse Power as per Section 28 *736.* Is Refrigerating Machinery fitted for cargo purposes *no.* Is Electric Light fitted *yes.*

ENGINES, &c.—Description of Engines *Triple Expansion.* No. of Cylinders *Three.* No. of Cranks *Three.*
 Dia. of Cylinders *32 1/2", 52 3/4", 86 3/8"* Length of Stroke *55"* Revs. per minute *66* Dia. of Screw shaft *as per rule 17 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
 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
 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 *8' 8"*
 Dia. of Tunnel shaft *as per rule 16 1/4"* Dia. of Crank shaft journals *as per rule 17 1/2"* Dia. of Crank pin *18 3/8"* Size of Crank webs *30" x 11 1/2"* Dia. of thrust shaft under
 collars *17"* Dia. of screw *19' 9"* Pitch of Screw *17' 6"* No. of Blades *4* State whether moveable *yes.* Total surface *109.7 sq. ft.*
 No. of Feed pumps *Two.* Diameter of ditto *4 3/8"* Stroke *27"* Can one be overhauled while the other is at work *yes.*
 No. of Bilge pumps *Two.* Diameter of ditto *5 3/8"* Stroke *27"* Can one be overhauled while the other is at work *yes.*
 No. of Donkey Engines *2 Centrifugal* Pumps *4 Keir's and 1 Duplex.* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *2 - 3 1/2" dia. 2 - 3 1/2" dia. in stokehold.* In Holds, &c. *1st Hold 2 - 3 1/2" dia. 1st 2 Hold 2 - 3 1/2" dia. 1st 3 Hold 2 - 3 1/2" dia.*
 No. of Bilge Injections *1* sizes *8 3/8" dia.* Connected to condenser, or to circulating pump *C.P.* Is a separate Donkey Suction fitted in Engine room & size *yes 5 3/8" dia.*
 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 & 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 *✓*
 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 *Is Forced Draft fitted* *yes.* No. and Description of Boilers *4 S.E. Cylindrical multitubular.*
 Total Heating Surface of Boilers *10118 sq. ft.* Working Pressure *205 lb.* Tested by hydraulic pressure to *✓* Date of test *✓* No. of Certificate *✓*
 Can each boiler be worked separately *yes.* Area of fire grate in each boiler *56 sq. ft.* No. and Description of Safety Valves to
 each boiler *2 Direct-Spring Loaded.* Area of each valve *11.79 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' 4"* Mean dia. of boilers *14' 9 3/8"* Length *12' 1 1/2"* Material of shell plates *Steel.*
 Thickness *1 3/32"* Range of tensile strength *29 1/2 tons.* Are the shell plates welded or flanged *no.* Descrip. of riveting: cir. seams *Lap D.R.*
 Long. seams *D.B.S.* Diameter of rivet holes in long. seams *1 1/2"* Pitch of rivets *19 3/8", 9 1/2", 4 3/8"* Lap of plates or width of butt straps *30"*
 Percentages of strength of longitudinal joint *rivets 116, plate 92.5.* Working pressure of shell by rules *222 lb.* Size of manhole in shell *15 3/4" x 11 1/8"*
 Size of compensating ring *Plate flanged.* No. and Description of Furnaces in each boiler *3 Cox.* Material *Steel* Outside diameter *45"*
 Length of plain part *top 11' 1 1/4", bottom 11' 1 1/4"* Thickness of plates *crown 19", bottom 33"* Description of longitudinal joint *Weld.* No. of strengthening rings *None.*
 Working pressure of furnace by the rules *210 lb.* Combustion chamber plates: Material *Steel* Thickness: Sides *1 1/8"* Back *3/8"* Top *1/8"* Bottom *1"*
 Pitch of stays to ditto: Sides *7 3/8" x 7 3/8"* Back *7 3/8" x 7 1/4"* Top *7 3/8" x 7 1/4"* If stays are fitted with nuts or riveted heads *nuts.* Working pressure by rules *252 lb.*
 Material of stays *Steel.* Area at smallest part *1.5 sq. in.* Area supported by each stay *39 sq. in.* Working pressure by rules *203 lb.* End plates in steam space:
 Material *Steel.* Thickness *1 3/16"* Pitch of stays *15" x 14 3/8"* How are stays secured *D. nuts.* Working pressure by rules *237 lb.* Material of stays *Steel.*
 Area at smallest part *8.64 sq. in.* Area supported by each stay *220 sq. in.* Working pressure by rules *407 lb.* Material of Front plates at bottom *Steel.*
 Thickness *1"* Material of Lower back plate *Steel.* Thickness *3/4"* Greatest pitch of stays *14 3/8"* Working pressure of plate by rules *222 lb.*
 Diameter of tubes *3"* Pitch of tubes *4 1/4" x 4 3/8"* Material of tube plates *Steel.* Thickness: Front *1"* Back *3/8"* Mean pitch of stays *8.56"*
 Pitch across wide water spaces *14"* Working pressures by rules *223 lb., 405 lb.* Girders to Chamber tops: Material *Steel.* Depth and
 thickness of girder at centre *10" x 1.5"* Length as per rule *33 1/2"* Distance apart *7 1/2"* Number and pitch of stays in each *3 - 7 3/8"*
 Working pressure by rules *236 lb.* Steam dome: description of joint to shell *✓* % 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 *Schmidt's* 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 *yes.*
 Diameter of Safety Valve *1 1/2"* Pressure to which each is adjusted *210 lb.* Is Easing Gear fitted *yes.*

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 & nuts. 1 set of Coupling bolts & nuts. 1 set of HP & MP also L.P. piston rings. 1 set of air, feed and bilge pump valves. Spare gear complete for circulating pump (Centrifugal). 4 halves of top end and 2 halves of bottom end connecting rod brasses. 1 piston rod with nuts. 3 eccentric straps & sheaves with bolts & nuts complete. 2 slide valve spindles with 1 set of brasses. 1 set of Front & Back pump lever link brasses. 1 air pump rod with nuts. 1 set of HP & MP slide valve rings. 1 set of main & auxiliary feed check valve lids. 5 Relief valve springs. 36 Condenser tubes 27 main boiler tubes. Spare parts for all auxiliary machinery, a quantity of gun ring bolts and cylinder cover studs & nuts, and a quantity of assorted bolts & nuts and Iron of various sizes.

The foregoing is a correct description,

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	Jan 27. 31. Feb. 1. 3. 5. 8. 9. 10. 15. 17. 24. 25. 28. Clear 1
	During erection on board vessel - -	28
	Total No. of visits	144

Is the

Is the approved plan of main boiler forwarded herewith Yes

22 22 22 *donkey* 22 22 ✓

Dates of Examination of principal parts—Cylinders /-2-2/ Slides /-2-2/ Covers /-2-2/ Pistons /-2-2/ Rods /-2-2/

Connecting rods /-2-2/ Crank shaft 3-2-2/ Thrust shaft 3-2-2/ Tunnel shafts 3-2-2/ Screw shaft 27-1-2/ Propeller 27-1-2/

Stern tube 27-1-2/ Steam pipes ^{Examined} tested 1-2-2/ Engine and boiler seatings 3-2-2/ Engines holding down bolts 3-2-2/

Completion of pumping arrangements 15-2-2/ Boilers fixed ✓ Engines tried under steam 1-3-2/

^{Examined} Completion of fitting sea connections 27-1-2/ Stern tube ✓ Screw shaft and propeller 28-1-2/

Main boiler safety valves adjusted 24-2-2/ Thickness of adjusting washers ^{F Boilers} PV $\frac{1}{8}$ " SV $\frac{1}{8}$ " ^{F Boilers} PV $\frac{1}{8}$ " SV $\frac{1}{8}$ " ^{C. Boilers} PV $\frac{1}{8}$ " SV $\frac{1}{8}$ " ^{S Boilers} PV $\frac{1}{8}$ " SV $\frac{1}{8}$ "

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. ✓

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 his*

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 18th November 1920. The vessel was placed in Messrs. Middle Dock Co^s. Dry Dock & the following examined for

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

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

The scoundlings 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 & found satisfactory. The main boiler and superheater safety valves were adjusted under steam to 205 & 210 lbs respectively.

The machinery throughout is now in good and safe working condition and eligible in our opinion to have the record of LMC 3-21 marked in the Society's Register Book.

The amount of Entry Fee ... £

Special £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

When received,

THU. MAR. 24 1921

Committee's Minute

Assigned

FRI. 5 AUG. 1921

FRI. 5 MAY. 1982

FRI 19 MAY 1972

CERTIFICATE WRITTEN