

REPORT ON MACHINERY.

No. 4207
WED. 16 JUL. 1919

Received at London Office

Date of writing Report 8th July 1919 When handed in at Local Office 10th July 1919 Port of Gothenburg
 No. in Survey held at Gothenburg Date, First Survey 12th April 1917 Last Survey 14th June 1919
 Reg. Book. on the Steel S.S. "Ovidia" (Number of Visits 6)
 Master A. G. Nordlund Built at Gothenburg By whom built Lindholmen Verktads Abf. Gothenburg Tons: Gross 4107 Net 2537
 Engines made at Gothenburg By whom made Lindholmen Verktads Abf. Gothenburg when made 1919
 Boilers made at Gothenburg By whom made Lindholmen Verktads Abf. Gothenburg when made 1919
 Registered Horse Power 389 Owners Adriatic Transatlantic Port belonging to Gothenburg
 Nom. Horse Power as per Section 28 389 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion steam No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26", 42" & 69" Length of Stroke 45" Revs. per minute 72 Dia. of Screw shaft 15 1/2" Material of Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners fitted 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 If two liners are fitted, is the shaft lapped or protected between the liners Ceswall's patent packing fitted Length of stern bush 6'-10"
 Dia. of Tunnel shaft 12 3/8" Dia. of Crank shaft journals 13 3/8" Dia. of Crank pin 14 1/2" Size of Crank webs 16" x 8 1/2" Dia. of thrust shaft under collars 13 3/4" Dia. of screw 18'-6" Pitch of Screw 14'-0" No. of Blades 4 State whether moveable No Total surface 91 sq. feet
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 22" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 22" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 7 1/2" x 5" x 7", 7 1/2" x 5" x 7", 9" x 12" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3 1/2" In Holds, &c. No 1 hold: Two 3 1/2" No 2 hold: Two 3 1/2"
 No. of Bilge Injections 1 size 8 1/2" Connected to condenser, or to circulating pumps Yes a separate Donkey Suction fitted in Engine room & size Yes, 3 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 None
 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 in stokehold 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 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 Bearing engine platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Rheinischen Stahlwerke, Werk III, Duisburg
 Total Heating Surface of Boilers 5205 sq. ft. Is Forced Draft fitted Yes No. and Description of Boilers Three, cylindrical, multibular
 Working Pressure 185 lbs. pr. sq. in. Tested by hydraulic pressure to 370 lbs. pr. sq. in. Date of test 4/11/18 No. of Certificates 131, 132, 133
 Can each boiler be worked separately Yes Area of fire grate in each boiler 40 sq. feet No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 12.56 sq. in. Pressure to which they are adjusted 190 lbs. pr. sq. in. Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 38" Mean dia. of boilers 12'-10 7/8" Length 11'-3" Material of shell plates Steel
 Thickness 1 1/32" Range of tensile strength 48,000-44,000 lbs. pr. sq. in. Are the shell plates welded or flanged No Descrip. of riveting: cir. seams None
 long. seams Double butt straps of unequal width riveted Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8 7/8" Lap of plates or width of butt straps 20" x 12 1/2"
 Per centages of strength of longitudinal joint 83.8 Working pressure of shell by rules 189 lbs. Size of manhole in shell 12" x 16"
 Size of compensating ring 30" x 1 1/32" No. and Description of Furnaces in each boiler 3 corrugated Material Steel Outside diameter 36"
 Length of plain part top 1/2" bottom 1/2" Thickness of plates top 1/2" bottom 1/2" Description of longitudinal joint welded No. of strengthening rings Yes
 Working pressure of furnace by the rules 209 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 2 1/32" Top 1 1/16" Bottom 7/8"
 Pitch of stays to ditto: Sides 8 1/2" x 7 1/4" Back 7 3/4" x 7 1/2" Top 8" x 7 1/2" If stays are fitted with nuts or riveted heads Double nut and riveted head and nut Working pressure by rules 190 lbs.
 Material of stays Steel Area at smallest part 1.48 sq. in. Area supported by each stay 58.1 sq. in. Working pressure by rules 192 lbs. End plates in steam space: Material Steel Thickness 1 1/16" Pitch of stays 16" x 18 1/2" How are stays secured Double nut and riveted Working pressure by rules 193 lbs. Material of stays Steel
 Area at smallest part 6.07 sq. in. Area supported by each stay 296 sq. in. Working pressure by rules 211 lbs. Material of Front plates at bottom Steel
 Thickness 7/8" Material of Lower back plate Steel Thickness 2 1/2" Greatest pitch of stays 7 1/2" x 12 7/8" Working pressure of plate by rules 221 lbs.
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 1/2" Material of tube plates Steel Thickness: Front 7/8" Back 1 3/16" Mean pitch of stays 11 3/8"
 Pitch across wide water spaces 13 3/4" Working pressures by rules 267 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 2 x (7 3/4" x 7 7/8") Length as per rule 38" Distance apart 9" Number and pitch of stays in each Two, 8"
 Working pressure by rules 189 lbs. Steam dome: description of joint to shell Yes % of strength of joint Yes
 Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes
 Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

SUPERHEATER. Type Schmidt's Date of Approval of Plan No plan submitted Tested by Hydraulic Pressure to 500 lbs.
 Date of Test 28th May 1918 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 190 lbs. pr. sq. in. Is Easing Gear fitted Yes

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 connecting rod top and bolts and nuts, 2 connecting rod bottom end bolts and nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed and bilge pump valves, 1 propeller shaft, 1 air pump rod, 1 set of 14 piston rings, 1 metal shaft for circulating pump worm gear, 1 set of air pump valves, 1/2 set of valves for donkey feed pumps, 4 ordinary boiler tubes and 2 stay tubes, 10 condenser tubes, 30 condenser tube bushes, 1 set of safety valve springs, 1 spring for steam reduction valve to engines, a quantity of assorted bolts and nuts, iron of various sizes.

The foregoing is a correct description,

HOLMENS VERKSTADS AKTIEBOLAG

W. HOK

gen.

O. R. on Survey

Manufacturer.

Dates of Survey while building: During progress of work in shops - - - 1917: Apr. 12, Aug. 29, 30, Sept. 12, 19, 22, 24, Oct. 24, Dec. 18, 1918: Jan. 3, 12, 15, Feb. 18, 20, March 4, 27, Apr. 15, 18, 23, May 6, 16, June 4, July 10, 31, Aug. 28, Sept. 4, 24, 26, Oct. 1, 2, 31, Nov. 4, Dec. 30, 1919: Jan. 18, 21, 28, 30, Feb. 5, 10, 24, 25, March 10, 12, Apr. 2, 15, May 10, 13, June 2, 4, 1919: Feb. 25, March 12, 20, 27, Apr. 4, 7, 8, 10, 28, 29, May 6, 12, 14, 17, 21, 28, June 3, 4, 5, 7, 17. Total No. of visits 66

Is the approved plan of main boiler forwarded herewith

Forwarded per Commercial papers book

Dates of Examination of principal parts: Cylinders 12/1, 15/1, 18/1, 19/1, Slides 4/3/18, 10/3/19, Covers 2/1/19, Pistons 2/1/19, Rods 10/3/19, Connecting rods 10/3/19, Crank shaft 17/4, 30/4, 16/4, Thrust shaft 8/1/18, 30/1/19, Tunnel shafts 2/1, 2/2, 2/4, 2/19, Screw shaft 12/4/17, Propeller 10/3/19, Stern tube 3/10/18, Steam pipes tested 25/4 x 13/5/19, Engine and boiler seatings 7/12/18, Engines holding down bolts 20/3/19, Completion of pumping arrangements 5/6/19, Boilers fixed 29/4/19, Engines tried under steam 2/5/19, Completion of fitting sea connections 27/3/19, Stern tube 12/3/19, Screw shaft and propeller 27/3/19, Main boiler safety valves adjusted 17/6/19, Thickness of adjusting washers None fitted. Nuts properly secured. Lloyd's 2244, 8.11.18, V. Lloyd 1359, Lloyd 12.4.17, V. Material of Crank shaft Steel Identification Mark on Do. 2. As per forging reports Material of Thrust shaft Steel Identification Mark on Do. R. 1.19, V. Lloyd 1359 Material of Tunnel shafts Steel Identification Marks on Do. 2. As per forging reports Material of Screw shafts Steel Identification Marks on Do. 12.4.17, V. Lloyd 1359 Material of Steam Pipes Steel Test pressure 555 lbs per sq. inch 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 No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under special survey, and all the requirements of the Rules have been complied with. The shafting as per forging reports attached. The boilers as per approved plan. The workmanship is good. This vessel is fitted with wireless telegraphy of the Telefunken system.

The machinery of this vessel is eligible in our opinion to be classed in the Register Book of this Society with the notation of a *LMC 6,19, being in a good and safe working condition at a working pressure of 185 lbs per sq. inch.

The amount of Entry Fee ... £ 54.60 : When applied for, 9th July 1919. Special ... £ 718.00 : Donkey Boiler Fee ... £ : Travelling Expenses (if any) £ : When received, 16/8/19

W. Paulson Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 22 JUL. 1919
Assigned + L.M.C. 6.19
F.D.

