

REPORT ON MACHINERY.

Date of writing Report 11th Sept. 1922 When handed in at Local Office 19 Port of Bremen Received at London Office FRI. 15 SEP. 1922

No. in Survey held at Gentemünde Date, First Survey 5th April Last Survey 11th September 1922

Reg. Book. on the Steel single scst "MORA" (Number of Visits 17)

Master Gentemünde Built at Gentemünde By whom built G. Sebeck & Co. Tons { Gross 5152
Net 2839

Engines made at Gentemünde By whom made G. Sebeck & Co. When built 1922

Boilers made at Gentemünde By whom made G. Sebeck & Co. when made 1922

Registered Horse Power 328 Owners F. G. Strick & Co. Ltd. Port belonging to Swansea

Nom. Horse Power as per Section 28 328 347 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 23 1/4, 38 1/4, 63" Length of Stroke 43 3/8" Revs. per minute 80 Dia. of Screw shaft 14.26 1/2 362 348 m/m Material of Ingot

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner 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 no 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 yes Length of stern bush 1540 m/m

Dia. of Tunnel shaft 12.21 = 310 m/m as per rule 310 m/m Dia. of Crank shaft journals 12.82 = 325 m/m as per rule 326" Dia. of Crank pin 335 m/m Size of Crank webs 220.630 Dia. of thrust shaft under collars 326 m/m Dia. of screw 5000 Pitch of Screw 5030 m/m No. of Blades 4 State whether moveable yes Total surface 8.36 sq m/m

No. of Feed pumps 2 Diameter of ditto 9.5 m/m Stroke 550 m/m Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3.93 = 100 Stroke 550 m/m Can one be overhauled while the other is at work yes

No. of Donkey Engines 4 Sizes of Pumps all other side No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 5: 72-80 m/m dia. In Holds, &c. 2 in each hold 76 m/m dia.

No. of Bilge Injections 1 sizes 185 m/m Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 80 m/m

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 both

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 bilge suction pipes How are they protected wooden casings

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 no Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record 4736 #15) Manufacturers of Steel Gentemünde Maschinenbauwerk A.G. Abt. Maschinenbau

Total Heating Surface of Boilers 440 sq m Is Forced Draft fitted yes No. and Description of Boilers 2 cylindrical multibored

Working Pressure 14.5 kg Tested by hydraulic pressure to 19.5 kg Date of test 19/5 & 14/7.22 No. of Certificate —

Can each boiler be worked separately yes Area of fire grate in each boiler 5.35 sq meters No. and Description of Safety Valves to each boiler 2 Area of each valve Di 3.93 = 7854 sq m/m Pressure to which they are adjusted 14.5 kg Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 280 m/m Mean dia. of boilers 4432 m/m Length 3690 m/m Material of shell plates Steel

Thickness 32 m/m Range of tensile strength 45-52 kg Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

long. seams quadruple Diameter of rivet holes in long. seams 37 m/m Pitch of rivets 466 m/m Lap of plates or width of butt straps 740 m/m

Per centages of strength of longitudinal joint 98 Working pressure of shell by rules 14.5 kg Size of manhole in shell 350 x 450 m/m

Size of compensating ring 850 x 950 m/m No. and Description of Furnaces in each boiler 3, Morrison Material Steel Outside diameter 1150 m/m

Length of plain part top Thickness of plates crown 15 m/m Description of longitudinal joint welded No. of strengthening rings —

Working pressure of furnace by the rules 14.5 kg Combustion chamber plates: Material Steel Thickness: Sides 17 m/m Back 16.5 m/m Top 17 m/m Bottom 21 m/m

Pitch of stays to ditto: Sides 200 x 180 Back 200 x 180 Top 200 x 200 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 17.6 kg

Material of stays Steel Area at smallest part 1046 sq cm Area supported by each stay 360 sq cm Working pressure by rules 18 kg End plates in steam space:

Material Steel Thickness 29 m/m Pitch of stays 400 x 420 How are stays secured with washers Working pressure by rules 16.8 kg Material of stays Steel

Area at smallest part 4180 sq cm Area supported by each stay 1680 sq cm Working pressure by rules 18.2 kg Material of Front plates at bottom Steel

Thickness 27.5 m/m Material of Lower back plate Steel Thickness 25 m/m Greatest pitch of stay 360 x 110 m/m Working pressure of plate by rules 18.7 kg

Diameter of tubes 76 m/m Pitch of tubes 105 x 105 Material of tube plates Steel Thickness: Front 27.5 m/m Back 22 m/m Mean pitch of stays 210 m/m

Pitch across wide water spaces 360 m/m Working pressures by rules 14.75 kg Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 240 x 2 x 18 m/m length as per rule 850 m/m Distance apart 200 Number and pitch of stays in each 3-200

Working pressure by rules 14.5 kg 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 —

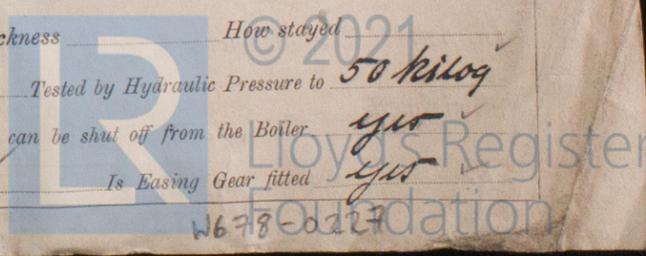
Pitch of rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed —

SUPERHEATER. Type Samuel's Patent Date of Approval of Plan — Tested by Hydraulic Pressure to 50 kg

Date of Test 19th May 1922 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes

Diameter of Safety Valve 50 m/m Pressure to which each is adjusted 14.5 kg Is Easing Gear fitted yes

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.



IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *See below.*

SPARE GEAR. State the articles supplied:—1 Propeller shaft, 2 propeller blades, 1 slide valve rod, 1 pair of bottom and top end
beams, 2 connecting rod bottom bolts & 4 cross head bolts & nuts, 2 main bearing bolts, 2 sets of coupling bolts, 8 piston
rings for H.P. 6 ditto for M.P. & 6 ditto for L.P. cylinder, 10 junk ring bolts, 10 cylinder cover bolts, 4 valve chest cover
bolts, 2 sets of link beams, 1 set of fuel pump valves, 1 air pump piston rod, 25 condenser tubes, 1 set of check
valves, 1 set of safety valve springs, 1 dozen boiler tubes. For circulating pumps:—1 piston and
piston rod, 1 slide valve rod, 2 connecting rod top and bottom beams, 1 main bearing.
A quantity of assorted bolts and nuts. Iron of various sizes.

The foregoing is a correct description,

Schiffswerft, Maschinenfabrik und

Trockendocks

F. J. Hoff

Hafen G. Rindholm

Manufacturer.

Dates of Survey while building: During progress of work in shops --- 1922:— April 15, 26, 30 June 10, 16 July 14, 31
During erection on board vessel --- July 28, 31, August 9, 12, 20, 29, Sept. 4, 6, 11.
Total No. of visits 17.

Is the approved plan of main boiler forwarded herewith *Yes*

“ “ “ donkey “ “ “ *see below*

Dates of Examination of principal parts—Cylinders 5/4/22 Slides 5/4/22 Covers 5/4/22 Pistons 5/4/22 Rods 26/5/22
Connecting rods 26/5/22 Crank shaft 26/5/22 Thrust shaft 26/5/22 Tunnel shafts 26/5/22 Screw shaft 5/4/22 Propeller 20/8/22
Stern tube 20/8/22 Steam pipes tested 31/7. 20/8/22 Engine and boiler seatings 26/6/22 Engines holding down bolts 16/6/22
Completion of pumping arrangements 29/8/22 Boilers fixed 28/7/22 Engines tried under steam 6/9/22
Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller 20/8/22
Main boiler safety valves adjusted 11.9.22 Thickness of adjusting washers *see post* *Carbon boiler* 20 m/m *Test pipes* 12.5 m/m *Donkey boiler* 18 m/m
Material of Crank shaft *St. Steel* Identification Mark on Do. G. L. Material of Thrust shaft *St. Steel* Identification Mark on Do. G. L.
Material of Tunnel shafts *St. Steel* Identification Marks on Do. G. L. Material of Screw shafts *St. Steel* Identification Marks on Do. G. L.
Material of Steam Pipes *Steel* Test pressure 50 Kilogramms
Is an installation fitted for burning oil fuel *Yes* 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.)

Size of Donkey Engine:—1 Field pump (Main) $\frac{230 \times 160}{375}$, 1 $\frac{230 \times 150}{250}$, 1 $\frac{200 \times 260}{350}$ 1 (Contingency) $\frac{200 \times 900}{180}$ m/m.

These Engine and Boiler have been completed in accordance with the approved plan, the Secretary's letter and otherwise in conformity with the Rules.

The materials used in the construction and the workmanship are good.

See Rpt. 9 attached.

Certificate (if required) to be sent to

The amount of Entry Fee ... £	:	:	When applied for,
Special ... £	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

A. G. Kamm
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FR! SEP. 29 1922

Assigned *L. D. G. 22.*
F. D. O. G.

