

REPORT ON MACHINERY.

No. 600

Date of writing Report 11th Sept. 1922 When handed in at Local Office

Received at London Office

FRI. 15 SEP. 1922

No. in Survey held at Gesteimünde

Date, First Survey 5th April

Last Survey 11th September 1922

Reg. Book.

on the Steel single scut "MORA"

(Number of Visits)

Gross 5152

Tons Net 2839

When built 1922

when made 1922

when made 1922

Master

Built at Gesteimünde

By whom built G. Seebach & Co.

Engines made at Gesteimünde

By whom made G. Seebach & Co.

Boilers made at Gesteimünde

By whom made G. Seebach & Co.

Registered Horse Power 328

Owners F. C. Strick & Co. Ltd.

Port belonging to Swamra

Nom. Horse Power as per Section 28 328

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 3/4, 63"

Length of Stroke 43 3/8"

Revs. per minute 80

Dia. of Screw shaft 14.26"

as per rule 362

as fitted 350"

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

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

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

Dia. of Tunnel shaft 12.21" as per rule 310 m/m

Dia. of Crank shaft journals 12.82" as per rule 325 m/m

Dia. of Crank pin 3.35 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 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"

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

Size 18 m/m

Connected to condenser, or to circulating pump Yes

Is a separate Donkey Suction fitted in Engine room & size 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

worked from

BOILERS, &c.—(Letter for record 4736 #45)

Manufacturers of Steel Gesteimünde

Total Heating Surface of Boilers 440 m/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 m/m

No. and Description of Safety Valves to each boiler 2

Area of each valve 7854 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 rivets 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, Moniron

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 m/m

Area supported by each stay 360 m/m

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 nuts & washers

Working pressure by rules 16.8 kg

Material of Front plates at bottom Steel

Area at smallest part 4180 m/m

Area supported by each stay 1680 m/m

Working pressure by rules 18.2 kg

Material of Lower back plate Steel

Thickness 27.5 m/m

Greatest pitch of stays 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

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

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

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 pump:—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

Svea G. Lundholm

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1922:—April 5, May 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 14.9.22 Thickness of adjusting washers *star post* *Starboard boiler* *Port boiler* *Donkey boiler*
20 m/m 12.5 m/m 18 m/m 32 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 kilogrammes ✓

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 (Water) $\frac{230 \times 160}{375}$, 1 $\frac{230 \times 150}{250}$, 1 $\frac{200 \times 260}{350}$ 1 (Contingency) $\frac{200 \times 900}{780}$ m/m.

Certificate (if required) to be sent to

The amount of Entry Fee ... £ : : When applied for,
Special ... £ : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
see Rpt 9.

When received,

19.

Committee's Minute

FR' SEP. 29 1922

Assigned

L. D. G. 22.

F. J. O. G.

G. H. G. Kamm.

Engineer Surveyor to Lloyd's Register of Shipping.



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