

REPORT ON MACHINERY.

No. 802

Port of *Bergen*

RECEIVED 22 FEB 1910

No. in Survey held at *Bergen*

Date, first Survey *August 13th* Last Survey *February 15th 1910*

Book. *159*

(Number of Visits *62*)

on the *Steel screw steamer "Skulda"*

Tons Gross *1105*
Net *648*
When built *1910*

Master *Martinussen* Built at *Bergen*

By whom built *Burgins Mik. Varksted*

Machines made at *Bergen*

By whom made *Burgins Mik. Varksted*

when made *1910*

Boilers made at *Bergen*

By whom made *Burgins Mik. Varksted*

when made *1910*

Registered Horse Power *128*

Owners *William Hansen*

Port belonging to *Bergen*

Horse Power as per Section 28 *122.08*

Is Refrigerating Machinery fitted for cargo purposes *No*

Is Electric Light fitted *No*

Engines, &c.—Description of Engines *Vertical Triple Expansion*

No. of Cylinders *3* No. of Cranks *3*

No. of Cylinders *16 1/2 - 26 - 44* Length of Stroke *30*

Revs. per minute *84*

Dia. of Screw shaft *10"* Material of *Steel*

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

The propeller boss If the liner is in more than one length are the joints burned

If the liner does not fit tightly at the part

When the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

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

Length of stern bush *45 1/2"*

Dia. of Tunnel shaft *8 1/8"* Dia. of Crank shaft journals *8 5/8"*

Dia. of Crank pin *8 3/4"*

Size of Crank webs *16 5/8 x 6"* Dia. of thrust shaft under

rs *8 3/4"* Dia. of screw *12-3"* Pitch of Screw *12-6"*

No. of Blades *4*

State whether moveable *no* Total surface *49*

No. of Feed pumps *2* Diameter of ditto *2 1/2"* Stroke *16"*

Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* Diameter of ditto *2 3/4"* Stroke *16"*

Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *3* Sizes of Pumps *7 1/2-8 x 7 1/2-8 x 5 1/2-8 x 5 1/2-8 x 4*

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *One 2 1/2" separate suction, one 2 1/4" & 2 off, 2" dia. In Holds, &c. 2 off, 2" dia. to fore hold, 4 off, 2" dia. to*

hold & one off, 2 1/4" dia. to after well. Bilge & Tank pipe arrangements all as approved

Bilge Injections *on* sizes *4" dia* Connected to *condenser* circulating pump *yes*

Is a separate Donkey Suction fitted in Engine room & size *yes, one 2 1/2"*

Are 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 the connections with the sea direct on the skin of the ship *yes*

Are they Valves or Cocks *both valves & cocks*

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *yes*

Are the Discharge Pipes above *above* the deep water line *yes*

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*

Are the pipes carried through the bunkers *none*

How are they protected *~*

Are the 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 examination of completion of fitting of Sea Connections *January 12th* of Stern Tube *January 12th* Screw shaft and Propeller *January 12th*

Is the Screw Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes* worked from *top platform*

ERS, &c.—(Letter for record *June 23rd*) Manufacturers of Steel *The Steel Co. of Scotland, Ltd., Glasgow*

Heating Surface of Boilers *2000 sq. ft.* Is Forced Draft fitted *No* No. and Description of Boilers *One ordinary marine*

Working Pressure *175 LBS* Tested by hydraulic pressure to *350 LBS* Date of test *January 6th* No. of Certificate *~*

Can the boiler be worked separately *~* Area of fire grate in boiler *57 sq. ft.* No. and Description of Safety Valves to

boiler *2 off, 8.62 sq. in.* Area of each valve *8.62 sq. in.* Pressure to which they are adjusted *175 LBS* Are they fitted with easing gear *yes*

Is the distance between boilers or uptakes and bunkers *11" x 17"* Mean dia. of boilers *14'-4 3/8"* Length *10'-6 3/4"* Material of shell plates *Steel*

Range of tensile strength *28-32* Are the shell plates *welded or flanged* *yes* Descrip. of riveting: cir. seams *Single*

Diameter of rivet holes in long. seams *1 1/4"* Pitch of rivets *8.08"* width of butt straps *18 1/8"*

Working pressure of shell by rules *180.4 LBS* Size of manhole in shell *12" x 16"*

Compensating ring *Mc Nails* No. and Description of Furnaces in each boiler *3 Doughtons* Material *Steel* Outside diameter *3'-9 3/4"*

Thickness of plates *17"* Description of longitudinal joint *~* No. of strengthening rings *~*

Working pressure of furnace by the rules *178 LBS* Combustion chamber plates: Material *Steel* Thickness: Sides *5/8"* Back *2 1/32"* Top *5/8"* Bottom *1"*

Are the stays fitted with *riveted heads* *yes* Working pressure by rules *183.2 LBS*

Diameter at smallest part *1 1/2"* Area supported by each stay *78.62* Working pressure by rules *176* End plates in steam space:

Thickness *1 1/8" & 1 1/4"* Pitch of stays *15" x 15"* How are stays secured *double nut* Working pressure by rules *180.5 LBS* Material of stays *Steel*

Area supported by each stay *225 sq. in.* Working pressure by rules *190 LBS* Material of Front plates at bottom *Steel*

Material of Lower back plate *Steel* Thickness *7/8"* Greatest pitch of stays *12" x 16"* Working pressure of plate by rules *194.3 LBS*

Pitch of tubes *4 1/2" x 4 3/4"* Material of tube plates *Steel* Thickness: Front *7/8"* Back *7/8"* Mean pitch of stays *9 1/2" x 14 1/4"*

Working pressures by rules *203 LBS* Girders to Chamber tops: Material *Steel* Depth and

Length as per rule *2'-3 1/2"* Distance apart *4 1/2"* Number and pitch of stays in each *2 off, 1 1/2" x 8"*

Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Distance between rings Working pressure by rules End plates: Thickness How stayed

Pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

Manufacturers of Steel *The Steel Co. of Scotland, Ltd. Glasgow*

SPARE GEAR. State the articles supplied: One propeller, one screw shaft, 2 cross head bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, one set of coupling bolts, one set of piston springs, one set of feed & bilge pump valves, 14 induction tubes, 13 boiler tubes, 5 patent tube stoppers, one stern hatch, 2 main safety valve springs, 50 screw down tube glands, 6 gauge glasses, one dog rings, one set of fire hose H.P. piston valve packing rings, assorted bolts & nuts, round, square & flat iron, etc.

The foregoing is a correct description,

The foregoing is a correct description,

AS BERGENS MEKANISKE VÆRKSTED *Manufacturer.*

<p><i>Augt 23, 26</i> <i>Sept. 2, 10, 14, 18, 25</i> <i>Octbr. 14, 19, 20, 23</i></p>		<p><i>Sept. 25</i> <i>Octbr. 6, 12, 23, 29</i> <i>Novr. 22</i></p>		<p><i>Sept. 26</i> <i>Sept. 2, 10, 25</i> <i>Octbr. 2, 6, 26</i></p>		<p><i>Sept. 23, 26</i> <i>Sept. 2, 6, 14, 15</i> <i>Octbr. 6, 25</i></p>		<p><i>Sept. 23, 26</i> <i>Sept. 6, 14, 18, 25</i> <i>Octbr. 15</i></p>	
Cylinders		Slides		Covers		Pistons		Rods	
<p><i>Augt. 26</i> <i>Sept. 2, 18</i> <i>Octbr. 2, 13</i></p>		<p><i>Augt. 26</i> <i>Sept. 2, 6, 10, 14, 16, 25</i> <i>Octbr. Novbr.</i></p>		<p><i>Octbr. Novbr.</i> <i>Sept. 23, 26, 3</i></p>		<p><i>Octbr. Novbr.</i> <i>Sept. 25, 15, 19</i></p>		<p><i>Octbr. Jan</i> <i>Jan. 13 & 21</i></p>	
Connecting rods		Crank shaft		Tunnel shafts		Screw shaft		Propeller	
<p><i>Jan.</i> <i>7, 10, 12 & 13</i></p>		<p><i>Feb. 4th</i> <i>Feb. 10th</i></p>		<p><i>Novr. 26, 3</i> <i>Novr. 26, 3</i></p>		<p><i>Engines holding down bolts</i> <i>28, 11, 12, 14</i></p>		<p><i>Engines tried under steam</i> <i>Feb. 10th & 14th</i></p>	
Stern tube		Steam pipes tested		Engine and boiler seatings		Engines holding down bolts		Engines tried under steam	
<p><i>Feb. 14th</i> <i>Annualed</i></p>		<p><i>Feb. 14th</i> <i>Annualed</i></p>		<p><i>Feb. 8th</i> <i>Annualed</i></p>		<p><i>Feb. 10th & 14th</i> <i>Annualed</i></p>		<p><i>Feb. 10th & 14th</i> <i>Annualed</i></p>	
Main boiler safety valves adjusted		Thickness of adjusting washers		Check nuts		Identification Mark on Do.		Identification Mark on Do.	
<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>	
Material of Crank shaft		Material of Thrust shaft		Material of Screw shafts		Identification Marks on Do.		Identification Marks on Do.	
<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>	
Material of Tunnel shafts		Material of Steam Pipes		Test pressure		400 LBS		400 LBS	
<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>		<p><i>Annualed</i> <i>S. M. S. S.</i></p>	

General Remarks (State quality of workmanship, opinions as to class, &c. The workmanship of the above described machinery & boilers is in all details satisfactory & they are in my opinion eligible to receive notation * L.M.C. 2, 1910. Engines & boilers are fitted in the ship to my entire satisfaction & have been tried under steam with satisfactory results. The main boiler has been tested with hydraulic pressure to 350 LBS² & found good & tight, & the donkey boiler to 200 LBS² with satisfactory results. The following marks are stamped in front of boilers: - LLOYD'S TEST. 350 LBS. 1, 1910. S.F.E. & LLOYD'S TEST. 200 LBS. 2, 12, 09. S.F.E. The tail shaft is fitted with Cedarwall's protection & the stern tube provided with proper automatic oiling arrangement. The machinery & boilers are, so far as I have been able to observe, free from defects. The steel used in the construction of boilers, shaftings, rods etc., has been tested as required by Rules. ✓

It is submitted that
this vessel is eligible for
THE RECORD. + LMC.2.10.

The amount of Entry Fee.	£ 2	: 0	:	When applied for,
Special	£ 18	6	/4	February 1912
Donkey Boiler Fee	£ 3	: 9	:	When received,
Travelling Expenses (if any) £				February 1912

L. A. Eide
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 8 MAR 1910

Assigned

+ Lon 6.2.10

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Lloyd's Register
Foundation