

REPORT ON MACHINERY.

Port of *Bergen*

Received at London Office
Date, first Survey *Octbr. 10th* Last Survey *June 18th 1919*
(Number of Visits *36*)

No. in Survey held at *Bergen*

Book. *S/S Yard No 39*

er Built at *Finsturg*

By whom built *Haldnes Satskips Mek. Verksted* When built *1917*

ines made at *Bergen*

By whom made *Bergens Mek. Verksted* when made *1919*

ers made at *Bergen*

By whom made *Bergens Mek. Verksted* when made *1919*

gistered Horse Power

Owners

Port belonging to

m. Horse Power as per Section 28 *98*

Is Electric Light fitted

GINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*

Diameter of Cylinders *13 1/2" - 22" - 37"* Length of Stroke *24* Revolutions per minute *"* Diameter of Screw shaft as per rule *"*

Diameter of Tunnel shaft as per rule *"* Diameter of Crank shaft journals *7 5/16"* Diameter of Crank pin *7 5/16"* Size of Crank webs *5 1/4" x 14"*

Diameter of screw *"* Pitch of screw *"* No. of blades *"* State whether moveable *"* Total surface *"*

No. of Feed pumps *2* Diameter of ditto *2 1/2"* Stroke *12"* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *2* Diameter of ditto *2 1/2"* Stroke *12"* Can one be overhauled while the other is at work *Yes*

No. of Donkey Engines *"* Sizes of Pumps *"* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *"* In Holds, &c. *"*

No. of bilge injections *sizes* Connected to condenser, or to circulating pump *"* Is a separate donkey suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses *"* Are the roses in Engine room always accessible *"* Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship *"* Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *"* Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel *"* Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers *"* How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *"* Is the screw shaft tunnel watertight

BOILERS, &c.— (Letter for record *Sept 20th 1918*) Total Heating Surface of Boilers *1793* Is forced draft fitted

No. and Description of Boiler *One ordinary Scotch Boiler* Working Pressure *200 LBS* Tested by hydraulic pressure to *400 LBS*

Date of test *June 12th* Can each boiler be worked separately *"* Area of fire grate in each boiler *"* No. and Description of safety valves to each boiler *Not fitted here*

Area of each valve *"* Pressure to which they are adjusted *"* Are they fitted

Smallest distance between boilers or uptakes and bunkers or woodwork *"* Mean diameter of boilers *13' - 7 3/16"*

Material of shell plates *Steel* Thickness *1 3/8"* Description of riveting: circum. seams *Single* long. seams *Double*

Diameter of rivet holes in long. seams *1 3/8"* Pitch of rivets *9"* Width of butt straps *19 1/2"*

Percentages of strength of longitudinal joint *87.4* Working pressure of shell by rules *202 LBS* Size of manhole in shell *12" x 16"*

Plate *85.7* No. and Description of Furnaces in each boiler *3 corrugated* Material *Steel* Outside diameter *3' - 7 3/4"*

Length of plain part *top* Thickness of plates *bottom* } *5"* Description of longitudinal joint *welded* No. of strengthening rings *"*

Working pressure of furnace by the rules *230 LBS* Combustion chamber plates: Material *Steel* Thickness: Sides *3/4 + 1/32* Back *3/4 + 1/32* Top *3/4 + 1/32* Bottom *1"*

Pitch of stays to ditto: Sides *8 3/4" x 8 3/4"* Back *8 1/2" x 9"* Top *8 3/4" x 11"* If stays are fitted with nuts or riveted heads *riveted* Working pressure by rules *204 LBS*

Material of stays *Steel* Diameter at smallest part *1 3/4"* Area supported by each stay *76.56* Working pressure by rules *233 LBS* End plates in steam space:

Material *Steel* Thickness *1 1/4"* Pitch of stays *18 1/2" x 18 1/2"* How are stays secured *double nuts* Working pressure by rules *204 LBS* Material of stays *Steel*

Area at smallest part *7.25* Area supported by each stay *342.25* Working pressure by rule *225 LBS* Material of Front plates at bottom *Steel*

Thickness *1 5/16"* Material of Lower back plate *Steel* Thickness *7/8"* Greatest pitch of stays *3 1/2" x 9"* Working pressure of plate by rules *201 LBS*

Diameter of tubes *3 1/4"* Pitch of tubes *4 1/2" x 4 5/8"* Material of tube plate *Steel* Thickness: Front *1 5/16"* Back *7/8"* Mean pitch of stays *9" x 13 3/8"*

Pitch across wide water spaces *14 1/2"* Working pressures by rules *239 LBS* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *10" x 1 1/2"* Length as per rule *2'-9"* Distance apart *11"* Number and pitch of Stays in each *Two 8 3/4"*

Working pressure by rules *204 LBS* Superheater or Steam chest; how connected to boiler *"* Can the superheater be shut off and the boiler worked separately

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 *"*

If stiffened with rings *"* Distance between rings *"* Working pressure by rules *"* End plates: Thickness *"* How stayed *"*

Working pressure of end plates *"* Area of safety valves to superheater *"* Are they fitted with casing gear *"*



4 No 1356

DONKEY BOILER— Description

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with casing gear _____ If steam from main boilers can enter the donkey boiler _____

Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

Description of riveting long seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____

Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____

Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____ Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description, **FOR A/S BERGENS MEKANISKE VÆRKSTED**
 Manufacturer. *A. V. Olsen*

Dates of Survey { During progress of work in shops - - - - -
 { During erection on board vessel - - - - -
 { Total No. of visits

October 10th & 26th Novbr. 5th, 15th & 28th Decbr. 13th, 24th & 27th Janv. 7th, 14th & 21st Febr. 1st, 5th, 12th
 19th & 28th March 8th & 21st April 7th, 10th, 14th, 22nd & 24th May 2nd, 13th, 19th, 22nd, 26th, 27th & 31st
 June 3rd, 6th, 10th, 12th & 17th & 18th Total 36

General Remarks (State quality of workmanship, opinions as to class, &c.) The workmanship of the above described machinery & boiler is in all respects satisfactory & have same been constructed in accordance with the approved plans. The steel used in the construction has been tested as required by Rules & the machinery is eligible in my opinion to receive notation L.M.S. subject to the completion of the machinery, to the boiler mountings being examined & safety valves adjusted under steam to 200 LBS^{sq} & the whole of the machinery & boiler being properly fitted in the vessel & tried under steam.

Certificate (if required) to be sent to _____

The amount of Entry Fee. . . £ 1 : 0 :
 Special *Lo* £ 35 : 0 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ 1 : 15 :

When applied for. *June 19*
 When received. *June 19*

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

Committee's Minute
 Assigned *See Sea p.e. No 1994*

FRI. FEB. 20. 1920
 FRI. DEC. 17. 1920



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