

# REPORT ON MACHINERY.

Port of *Bergen*

Received at London Office

Date, first Survey *Octbr. 10<sup>th</sup>* Last Survey *June 18<sup>th</sup> 1919*

(Number of Visits *36*)

No. in Survey held at

*Bergen*

Book.

on the *S/S Yard No 39*

Tons { Gross  
Net

er

Built at *Tönsturg*

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

ines made at

*Bergen*

By whom made *Bergens Mek. Verksted*

when made *1919*

lers 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 *13½" - 22" - 37"*

Length of Stroke *24"*

Revolutions per minute

Diameter of Screw shaft

Diameter of Tunnel shaft

Diameter of Crank shaft journals

*7½"*

Diameter of Crank pin

*7½"*

Size of Crank webs *5¼" x 14"*

Diameter of screw

Pitch of screw

No. of blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

*2½"*

Stroke *12"*

Can one be overhauled while the other is at work

*Yes*

No. of Bilge pumps

Diameter of ditto

*2½"*

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

Is it fitted with a watertight door

worked from

BOILERS, &c.—

(Letter for record *Sept 20<sup>th</sup> 1918*) Total Heating Surface of Boilers

*1793*

Is forced draft fitted

No. and Description of Boiler

*One ordinary Scotch Boiler*

Working Pressure

Tested by hydraulic pressure to *400 LBS*

Date of test *June 12<sup>th</sup>*

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

easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean diameter of boilers *13'-7¾"*

Material of shell plates

*Steel*

Thickness *13/32"*

Description of riveting: circum. seams

*Single*

long. seams *Double*

Diameter of rivet holes in long. seams

*13/32"*

Pitch of rivets

*9"*

width of butt straps

*19½"*

Percentages of strength of longitudinal joint

*87.4*

Working pressure of shell by rules

*202 LBS*

Size of manhole in shell

*12" x 16"*

Size of compensating ring

*Mc Neil's*

No. and Description of Furnaces in each boiler

*3 corrugated*

Material *Steel*

Outside diameter *3'-7¾"*

Length of plain part

*top*

Thickness of plates

*5/8"*

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

*8¾" x 8¾"*

Back *8½" x 9"*

Top *8¾" x 11"*

If stays are fitted with nuts or riveted heads

*riveted*

Working pressure by rules

*233 LBS*

End plates in steam space:

Material of stays

*Steel*

Diameter at smallest part

*1¾"*

Area supported by each stay

*76.56*

Working pressure by rules

*204 LBS*

Material of stays

*Steel*

Material

*Steel*

Thickness

*1¼"*

Pitch of stays

*18½" x 18½"*

How are stays secured

*double nuts*

Working pressure by rules

*225 LBS*

Material of Front plates at bottom

*Steel*

Material

*Steel*

Thickness

*7/8"*

Greatest pitch of stays

*3½" x 9"*

Working pressure of plate by rules

*201 LBS*

Material of tube plates

*Steel*

Thickness: Front

*15/16"*

Diameter of tubes

*3¼"*

Pitch of tubes

*4½" x 4½"*

Material of tube plate

*Steel*

Thickness: Back

*7/8"*

Mean pitch of stays

*9" x 13¾"*

Pitch across wide water spaces

*14½"*

Working pressures by rules

*239 LBS*

Girders to Chamber tops: Material

*Steel*

Depth and

*Two*

*8¾"*

Thickness of girder at centre

*10" x 1½"*

Length as per rule

*2'-9"*

Distance apart

*11"*

Number and pitch of Stays in each

*Two*

*8¾"*

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

oles

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

End plates: Thickness

How stayed

Are they fitted with casing gear

Working pressure of end plates

Area of safety valves to superheater

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Lloyd's Register

Foundation

006809-006818 0086



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

Description of riveting long. seams 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 Plates 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. J. V. Nilsen

Dates of Survey { During progress of work in shops - Octbr. 10<sup>th</sup> & 26<sup>th</sup> Novbr. 5<sup>th</sup>, 15<sup>th</sup> & 28<sup>th</sup> Decbr. 13<sup>th</sup>, 24<sup>th</sup> & 27<sup>th</sup> Jan. 7<sup>th</sup>, 14<sup>th</sup> & 21<sup>st</sup> Feb. 1<sup>st</sup>, 5<sup>th</sup>, 12<sup>th</sup>  
During erection on board vessel - 19<sup>th</sup> & 28<sup>th</sup> March 8<sup>th</sup> & 31<sup>st</sup> April 7<sup>th</sup>, 10<sup>th</sup>, 14<sup>th</sup>, 23<sup>rd</sup> & 24<sup>th</sup> May 2<sup>nd</sup>, 13<sup>th</sup>, 19<sup>th</sup>, 22<sup>nd</sup>, 26<sup>th</sup>, 27<sup>th</sup> & 31<sup>st</sup>  
building { Total No. of visits June 3<sup>rd</sup>, 6<sup>th</sup>, 10<sup>th</sup>, 12<sup>th</sup> & 17<sup>th</sup> & 18<sup>th</sup> 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<sup>sq</sup> & the whole of the machinery & boiler being properly fitted in the vessel & tried under steam.

The amount of Entry Fee.. £ 1 : 0 :  
Special .. £ 35 : 0 :  
Donkey Boiler Fee .. £ : :  
Travelling Expenses (if any) £ 1 : 15 :  
When applied for, June 9, 19  
When received, June 19, 19  
Committee's Minute  
Assigned See Rec. p.e. to 1994

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

