

## REPORT ON MACHINERY.

No.

TUE. APR. 3 1923

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of Bremen

No. in Survey held at Bremen  
Reg. Book.

Date, First Survey

Last Survey

19

on the Twin S/S "MUNCHEN"

(Number of Visits)

Tons } Gross  
Net

Master

Built at Bremen

By whom built Act. Ges. Weser

When built

Engines made at Bremen

By whom made

when made

Boilers made at Bremen

By whom made

when made

Registered Horse Power

Owners

Port belonging to

14. P. 14,000

Nom. Horse Power as per Section 28 2788

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &amp;c.—Description of Engines 2 Sets Quadruple

No. of Cylinders 2 Each 2 1/2 Four 2 Each 2 1/2 Four 2

Dia. of Cylinders 34"-48 1/2"-69 3/4"-102"  
Length of Stroke 63" Recs. per minute 80

Dia. of Screw shaft as per rule 5 1/8" Material of shaft as fitted 500 5/8" screw shaft Steel

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 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

If two

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

Length of stern bush 2500 White metal

Dia. of Tunnel shaft as per rule 4 1/2" as fitted 4 1/2"

Dia. of Crank shaft journals as per rule 4 1/2" as fitted 4 1/2"

Dia. of Crank pin 4 1/2" Size of Crank webs

Dia. of thrust shaft under

Collars 4 1/2"

Dia. of screw 6000 1/2" Pitch of Screw

No. of Blades

Cast steel blades Cast iron boss

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

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

In Engine Room 5 at 100 1/2"

Tunnel 2 at 100 1/2"

In Holds, &amp;c. 1 at 100 1/2" 1 at 100 1/2" 2 at 100 1/2"

603 Centre well for 1 at 100 1/2" 1 at 100 1/2" 1 at 100 1/2" After hold 2 at 100 1/2"

No. of Bilge Injections 2 sizes 300 Connected to condenser, or to circulating pump pumps Is a separate Donkey Suction fitted in Engine room &amp; size Yes 150 1/2"

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 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

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 Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight Yes

Is it fitted with a watertight door Yes

worked from

BOILERS, &amp;c.—(Letter for record S)

Manufacturers of Steel

Double + 1 Single end

H.S. each D.B. 600 M<sup>2</sup>Total Heating Surface of Boilers 42000 M<sup>2</sup>

Is Forced Draft fitted Yes

No. and Description of Boilers

6 Double + 1 Single end. (Separate report Single end)

Working Pressure 15.5 kg 220 lb

Tested by hydraulic pressure to TOTAL GS (7 boilers) 10.5 kg

Date of test

No. of Certificate

Can each boiler be worked separately Yes

Area of fire grate in each boiler D. end 14.5 M<sup>2</sup>

No. and Description of Safety Valves to

Each boiler 5 Direct Spring

Dia. of each valve 100 1/2"

Pressure to which they are adjusted

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers 5200 1/2" Length 6/60 1/2"

Material of shell plates Steel

Thickness 38.5 1/2" Range of tensile strength 47-55 kg

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams

Lapped straps, double

Diameter of rivet holes in long. seams 41 1/2"

Pitch of rivets

Lap. of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets 48 1/2%

Working pressure of shell by rules 15.5 kg

Size of manhole in shell

Double riveted 41 1/2" dia

No. and Description of Furnaces in each boiler 8 Suspension

Material Steel

Outside diameter 1134 1/2"

Size of compensating ring 38.5 1/2" Thick

No. and Description of longitudinal joint Weld

36 kg tank

No. of strengthening rings

Length of plain part top

Thickness of plates bottom 1 1/2"

Description of longitudinal joint

Material Steel

Thickness: Sides 18.5 Back 18.5 Bottom 18.5

Working pressure of furnace by the rules 15.5 kg

Combustion chamber plates: Material Steel

Working pressure by rules 22 kg

Pitch of stays to ditto: Sides 190x200 Back

Top 190x200 stays are fitted with nuts or riveted heads Nuts

Working pressure by rules 18.5 kg End plates in steam space:

Material of stays Steel

Area at smallest part 38 1/2 42 kg

Area supported by each stay 190x200

Working pressure by rules 15.2 kg Material of stays Steel

Material Steel

Thickness 25 1/2"

Pitch of stays 430x380

How are stays secured Nuts

Working pressure by rules 15.2 kg Material of stays Steel

Area at smallest part 1/4"

Area supported by each stay 400x400

Working pressure by rules 15.1

Material of front plates at bottom Steel

Thickness 25 1/2"

Material of Lower back plate Steel

Thickness 25 1/2"

Greatest pitch of stays

Mean pitch of stays 236 1/2"

Diameter of tubes 1 1/2"

Pitch of tubes 103x105

Material of tube plates Steel

Thickness: Front 25 1/2"

Back 30 1/2"

Depth and

Pitch across wide water spaces 355 1/2"

Working pressures by rules 14.6

Girders to Chamber tops: Material Steel

Number and pitch of stays in each 190 pitch

Thickness of girder at centre 300x64

Length as per rule 1350

Distance apart 200 1/2"

% of strength of joint

Working pressure by rules 20 kg

Steam dome: description of joint to shell None

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

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

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IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

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

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders	Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft
Stern tube	Steam pipes tested	Engine and boiler seatings	Engines holding down bolts	Propeller
Completion of pumping arrangements	Boilers fixed	Engines tried under steam		
Completion of fitting sea connections	Stern tube	Screw shaft and propeller		
Main boiler safety valves adjusted	Thickness of adjusting washers			

Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes *Steel* Test pressure

Is an installation fitted for burning oil fuel 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

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

Committee's Minute TUE 17 APR 1923

Assigned

pt. 9a.

Port of *Bremen*

Continuation of Report No.

dated

on the

*S/S "MUNCHEN"*

*List of Pumps*

*Bath, Closet + Bidge pumps fitted to each main engine*

*Air pumps, 2 "Dual" Weir System*

*Steam Cylinders 360 1/2 dia 24/100 1/2 dia pumps 555 1/2 Stroke*

*Lead Weir type double 500 x 360 x 825 lbs*

*do do 400 x 280 x 600 "*

*Rec feed + ash ejector 2 Duplex 320 x 220 x 300 lbs*

*Ballast 1 Simplex 180 x 360 x 675 lbs*

*Bidge 1 Simplex 220 x 280 x 600 lbs*

*Fresh water 1 Simplex 140 x 180 x 300 lbs*

*Main Circulating 1 - Impeller 1300 1/2 dia 1 Stem Cyl 300 dia 1280 lbs*

*Aux " 1 - " 700 " " 155 " 450 "*

*E. J. Stoddart*

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Engineer Surveyor to Lloyd's Register of Shipping.



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