

REPORT ON MACHINERY.

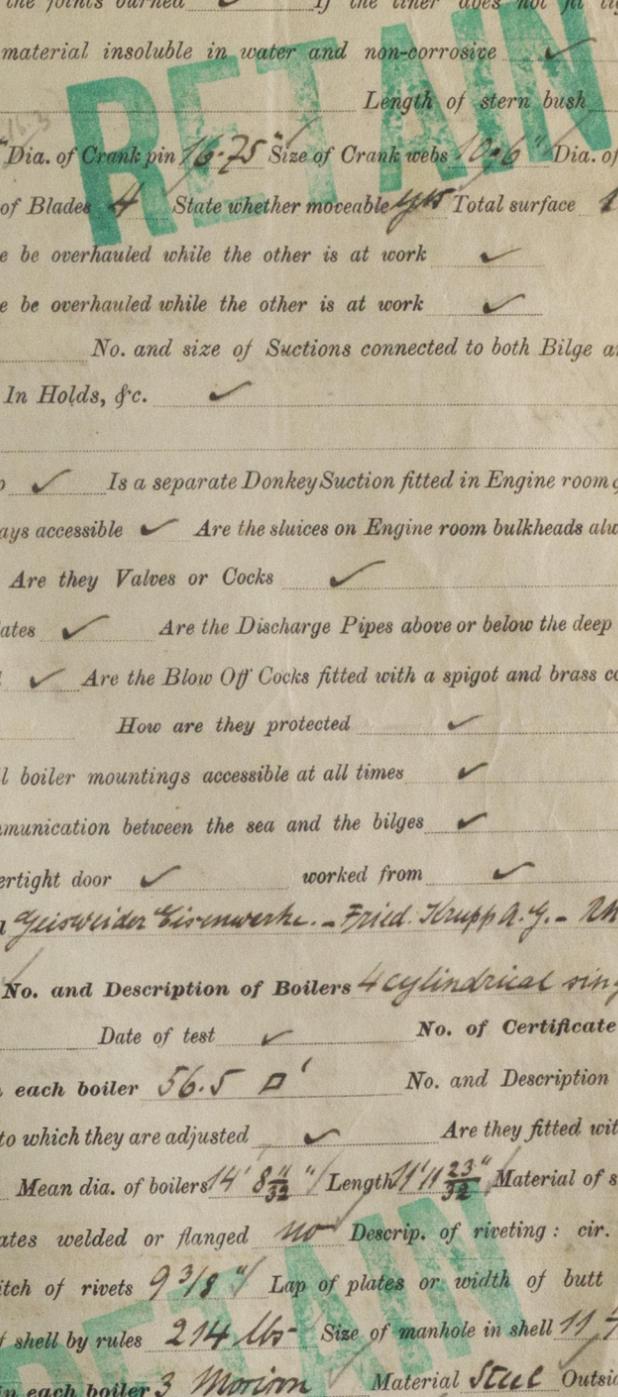
No. 456

Received at London Office
 Date of writing Report 31st May 1914 When handed in at Local Office 10 Port of Prussian
 Date of Survey held at Krimerhaufen Date of Survey 22 December 1914 Last Survey 17th March 1915
 Reg. Book. 2318 on the STEEL SC SR WOLFSBURG (Number of Visits 14)
 Tons { Gross 6185
 Net 3915
 When built 1915
 Master Yustemünde By whom built Joh. G. Tecklenborg A.G. when made 1915
 made at Yustemünde By whom made Joh. G. Tecklenborg A.G. when made 1915
 Builders made at Yustemünde By whom made Joh. G. Tecklenborg A.G. when made 1915
 Registered Horse Power 703 Owners Deutsche Dampfschiffahrts G. V. Haina Port belonging to Krimerhaufen
 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 31.5" 50.75" & 82.75" Length of Stroke 55.1" Revs. per minute ✓ Dia. of Screw shaft as per rule 12.3" Material of screw shaft Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes 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
 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 28"
 Dia. of Tunnel shaft as per rule 15.95" Dia. of Crank shaft journals as per rule 16.75" Dia. of Crank pin 16.25" Size of Crank webs 10.6" Dia. of thrust shaft under
 rollers 16.75" Dia. of screw 19'10" Pitch of Screw 19'10" No. of Blades 4 State whether moceable yes Total surface 1080'
 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 ✓ 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 ✓
 Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

OILERS, &c.—(Letter for record X(Y) Manufacturers of Steel Yustemünde Maschinenbau - Fried. Krupp A.G. - Rheinische Stahlwerke
 Total Heating Surface of Boilers 99200 Is Forced Draft fitted yes No. and Description of Boilers 4 cylindrical single ended
 Working Pressure 199 lbs Tested by hydraulic pressure to ✓ Date of test ✓ No. of Certificate ✓
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 56.50' No. and Description of Safety Valves to
 each boiler ✓ Area of each valve ✓ Pressure to which they are adjusted ✓ Are they fitted with easing gear ✓
 Smallest distance between boilers or uptakes and bunkers or woodwork ✓ Mean dia. of boilers 14' 8 3/4" Length 11' 11 3/4" Material of shell plates Steel
 Thickness 13/8" Range of tensile strength 22.9-33+ Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double & triple
 long. seams triple Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9 3/8" Lap of plates or width of butt straps 21 3/4"
 Per centages of strength of longitudinal joint 98 Working pressure of shell by rules 214 lbs Size of manhole in shell 11' 13" x 15' 3/4"
 Size of compensating ring 41 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 3, Morim Material Steel Outside diameter 41 1/2"
 Length of plain part top 8 1/2" Thickness of plates bottom 5/8" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 212 lbs Combustion chamber plates: Material Steel Thickness: Sides 43/64" Back 5/16" Top 43/64" Bottom 29/32"
 Pitch of stays to ditto: Sides 2 1/2" x 8 1/2" Back 2 1/2" x 6 3/4" Top 2 3/4" x 7 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 235 lbs
 Material of stay fine grain steel Area at smallest part 1.880" Area supported by each stay 670" Working pressure by rules 240 lbs End plates in steam space:
 Material Steel Thickness 1 1/32" Pitch of stays 4 3/4" x 4 7/8" How are stays secured nuts & washers Working pressure by rules 265 lbs Material of stays Steel
 Area at smallest part 3" Area supported by each stay 2080" Working pressure by rules 350 lbs Material of Front plates at bottom Steel
 Thickness 5/8" Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 13 7/16" Working pressure of plate by rules 280 lbs
 Diameter of tubes 3" Pitch of tubes 4 1/8" x 4 1/8" Material of tube plates Steel Thickness: Front 1 5/8" Back 29/32" Mean pitch of stays 8 1/4"
 Pitch across wide water spaces 13 6/32" Working pressures by rules 222 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 1/2" x 2 x 4 3/8" Length as per rule 34 5/8" Distance apart 7 3/16" Number and pitch of stays in each 3-7 3/4"
 Working pressure by rules 223 lbs Steam dome: description of joint to shell ✓ % of strength of joint ✓
 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 2019
 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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W412-069

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SAFETY GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1914: - Dec 12, 15, 24, 1915: - January 8, 15, 21, Feb 3, 13, 19, 20, 27 March 16, 24, 26.
{ During erection on board vessel --- }
Total No. of visits 14.

Is the approved plan of main boiler forwarded herewith *copy*
" " " donkey " " "

Dates of Examination of principal parts—Cylinders 7/15, 26/3/15 Slides 15/1/15 Covers 24/3/15 Pistons 24/3/15 Rods 2/1/15
Connecting rods 2/1/15 Crank shaft 24/12/14 Thrust shaft 2/1/15 Tunnel shafts 2/1/15 Screw shaft 3/2/15 Propeller 13/2/15
Stern tube 12/12/14 Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts ✓
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 *Steel* Identification Mark on Do. *M.B. 2.14* Material of Thrust shaft *Steel* Identification Mark on Do. *MB 9.14*
Material of Tunnel shafts *Steel* Identification Marks on Do. *K.A. 10.14* Material of Screw shafts *Steel* Identification Marks on Do. *EF 1.15*
Material of Steam Pipes ✓ Test pressure ✓

Is an installation fitted for burning oil fuel *No* 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.)

These Engines and Boilers as far as examined have been manufactured in accordance with the approved plans, the Secretary's letters and otherwise in general conformity with the Rules.

The workmanship is good and the steel materials used in the construction have been manufactured at a works approved of by the Committee and tested by the Society's Surveyors in accordance with the Rules.

When the Special Survey was discontinued in March 1915 the work was progressed as follows:—

All boiler material and shafts delivered and compared with Certificate. MP and L P cylinder tested by hydraulic pressure, all other castings with exception of bed plate and frame delivered examined found sound. Work on boilers commenced.

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

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

A. H. C. KEMP
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. JUN. 29 1920 FRI. AUG. 19 1921
Assigned *London*

