

REPORT ON MACHINERY.

Port of Helsing

Received at London Office 1905 25 APR 1905

No. in Survey held at Helsing - Nabow Date, first Survey 14th June 1904 Last Survey 13th April 1905
 Reg. Book. Suppl. on the Keel Screw Hammer, Elvine Höpperi (Number of Visits 16)
 Master P. Seemiller Built at Helsing By whom built Helsing - Oderwerke Tons { Gross 2086
 Engines made at Helsing By whom made Helsing - Oderwerke When built 1905 Net 1394
 Boilers made at " By whom made do do when made 1905
 Registered Horse Power 158 NHP Owners Robert Höpperi Port belonging to Helsing
 Nom. Horse Power as per Section 28 158 NHP Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines

Dia. of Cylinders _____ Length of Stroke _____ Revs. per minute _____ Dia. of Screw shaft _____ No. of Cylinders _____ No. of Cranks _____
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube _____ 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 _____
 Dia. of Tunnel shaft _____ Dia. of Crank shaft journals _____ Dia. of Crank pin _____ Size of Crank webs _____ Dia. of thrust shaft under collars _____ Dia. of screw _____ Pitch of screw _____ No. of blades _____ State whether moveable _____ 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 _____ 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 no) Total Heating Surface of Boilers 539 1/2 sq ft Is forced draft fitted no

No. and Description of Boilers one cylindrical boiler with 2 furnaces Working Pressure 92 1/2 lbs Tested by hydraulic pressure to 145 lbs
 Date of test 24/12/04 Can each boiler be worked separately _____ Area of fire grate in each boiler 21 sq ft No. and Description of safety valves to each boiler 2 spring safety valves Area of each valve 5 sq in Pressure to which they are adjusted 92 1/2 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 11 13/16 in Mean dia. of boilers 2 1/2 in Length 8 ft Material of shell plates steel
 Thickness 1 1/2 in Range of tensile strength 27-31 tons Are they welded or flanged flanged Descrip. of riveting: cir. seams double long. seams 3 rows
 Diameter of rivet holes in long. seams 2 1/32 in Pitch of rivets 3 in Lap of plates or width of butt straps 5 29/32 in
 Per centages of strength of longitudinal joint _____ Working pressure of shell by rules 93 lbs Size of manhole in shell 15 3/4 in x 11 3/4 in
 Size of compensating ring 5 1/8 in x 1 in No. and Description of Furnaces in each boiler 2 plain furnaces Material steel Outside diameter 2 1/4 in
 Length of plain part _____ Thickness of plates _____ Description of longitudinal joint welded No. of strengthening rings none
 Working pressure of furnace by the rules 138 lbs Combustion chamber plates: Material steel Thickness: Sides 1 1/32 in Back 1 1/32 in Top 3/16 in Bottom 1 1/32 in
 Pitch of stays to ditto: Sides 7 7/8 in Back 7 1/32 in Top 6 1/16 in If stays are fitted with nuts or riveted heads with nuts Working pressure by rules 127 lbs
 Material of stays steel Diameter at smallest part 1 1/32 in - 1 1/32 in Area supported by each stay 53 sq in Working pressure by rules 6000 lbs End plates in steam space: Material steel Thickness 1 1/32 in - 1 1/32 in Pitch of stays 13 3/4 in How are stays secured by nuts Working pressure by rules 118 lbs Material of stays steel
 Diameter at smallest part 1 1/32 in Area supported by each stay 190 sq in Working pressure by rules 7000 lbs Material of Front plates at bottom steel
 Thickness 1 1/32 in Material of Lower back plate steel Thickness 1 1/32 in Greatest pitch of stays 7 1/32 in Working pressure of plate by rules 217 lbs
 Diameter of tubes 3 in Pitch of tubes 3 1/16 in Material of tube plates steel Thickness: Front 2 1/32 in Back 1/8 in Mean pitch of stays 7 7/8 in
 Pitch across wide water spaces _____ Working pressures by rules 86 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 6 1/16 in x 2 1/32 in Length as per rule 19 1/16 in Distance apart 13 in Number and pitch of Stays in each 2, 6 1/16 in
 Working pressure by rules 118 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 holes _____ 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 easing gear _____

DONKEY BOILER— No. _____ 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 easing gear _____ If steam from main boilers can enter the donkey boiler _____

Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

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:—

Stettiner Oderwerke
 The foregoing is a correct description,
 für Schiff- und Maschinenbau
 Manufacturer.

Dates of Survey while building

{ During progress of work in shops - - } { During erection on board vessel - - } { Total No. of visits }	14/6	20/11	24/12.04	5/1	26/1.05
	13/2	44	13/4	05	
	8				

Is the approved plan of main boiler forwarded herewith _____

“ “ “ donkey “ “ “ *yes*

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

See please Report No 233.

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 £	see report	:	1905
Donkey Boiler Fee £	No 233	:	When received,
Travelling Expenses (if any) £	:	:	1905

Emil Herzberg
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 16 MAY 1905

Assigned

see minute on Sta. Rpt 233



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