

REPORT ON MACHINERY.

No. 104

Received at London Office **MONDAY 26 JAN 1885**

No. in Survey held at Bergen Date, first Survey 10th June 1884 Last Survey 3rd January 1885

Reg. Book. on the "Ganger Rolf" (Number of Visits 28) 1544.66

Tons 1193.85

Master C. H. Möller Built at Bergen By whom built Martens Olsen & Co When built 1885

Engines made at Bergen By whom made Martens Olsen & Co when made 1885

Boilers made at Bergen By whom made Martens, Olsen & Co when made 1885

Registered Horse Power 130 Owners Holt & Isachsen Port belonging to Stavanger

ENGINES, &c.—

Description of Engines Direct acting, inverted, High and low pressure, surface condensing

Diameter of Cylinders 30" x 57" Length of Stroke 33 No. of Rev. per minute 76 Point of Cut off, High Pressure 15¹/₄" Low Pressure 17"

Diameter of Screw shaft 9¹/₂" Diam. of Tunnel shaft 9" Diam. of Crank shaft journals 9¹/₂" Diam. of Crank pin 10" size of Crank webs 6¹/₈ x 11"

Diameter of screw 13' 5¹/₂" Pitch of screw 15'-0" No. of blades 4 state whether moveable no total surface 600'

No. of Feed pumps 2 diameter of ditto 3¹/₄" Stroke 23¹/₂" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 diameter of ditto 3¹/₄" Stroke 23¹/₂" Can one be overhauled while the other is at work yes

Where do they pump from each compartment.

No. of Donkey Engines 2 Size of Pumps 7³/₄ x 9" x 4¹/₈ x 7" Where do they pump from Ballast tanks, each

held, from bilge, from sea into boilers and on deck.

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

No. of bilge injections 1 and sizes 5³/₄ Are they connected to condenser, or to circulating pump circulating pump.

How are the pumps worked balance worked from low pressure crosshead

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Valves and cocks

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 below

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

What pipes are carried through the bunkers none How are they protected —

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

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock 16th December 1884.

Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from main deck

BOILERS, &c.—

Number of Boilers two Description single ended, circular. Whether Steel or Iron Iron

Working Pressure 80 Tested by hydraulic pressure to 160 Date of test Octbr: 9th '84

Description of superheating apparatus or steam chest upright circular neck flanged steam chest

Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately —

No. of square feet of fire grate surface in each boiler 360' Description of safety valves spring No. to each boiler two

Area of each valve 90" Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —

Are they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 12" Diameter of boilers 11' 1¹/₂"

Length of boilers 10' 6" description of riveting of shell long. seams double strap circum. seams double riv. lap Thickness of shell plates 3/4

Diameter of rivet holes 1 1/8" whether punched or drilled punched pitch of rivets 5.1 Lap of plating —

Percentage of strength of longitudinal joint 79.16 working pressure of shell by rules 81.081 size of manholes in shell 11 x 15"

Size of compensating rings inside steam door No. of Furnaces in each boiler two

Outside diameter 3' 1" length, top 7' 4" bottom 9' 6" thickness of plates 1/2 description of joint single lap if rings are fitted 1/2 ring at bottom

Greatest length between rings — working pressure of furnace by the rules 83 combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2

Number of stays to ditto, sides 8 back 8 top 24 radius — If stays are fitted with nuts or riveted heads rivetter heads working pressure of plating by rules 120

Diameter of stays at smallest part 1 1/8 working pressure of ditto by rules 93 end plates in steam space, thickness 3/4

Rate for pitch of stays to ditto 16 1/2 how stays are secured double nuts and washers working pressure by rules 84 diameter of stays at smallest part 1 1/16

Working pressure by rules 81 Front plates at bottom, thickness 1/16 Back plates, thickness 1/16

Greatest pitch of stays 8 working pressure by rules 93 Diameter of tubes 3 1/2 pitch of tubes 4 7/8 thickness of tube plates, front 1/16 back 3/4

How stayed 1/4" thick pitch of stays 9 1/2 x 16 width of water spaces 4 1/2 to 8"

Diameter of Superheater or Steam chest 2' 6" length 3' 0" thickness of plates 7/16 description of longitudinal joint double lap diam. of rivet holes 13/16

Pitch of rivets 2 7/8 working pressure of shell by rules over 80 diameter of flue — thickness of plates — If stiffened with rings —

Distance between rings — working pressure by rules — end plates of superheater, or steam chest; thickness 7/8 how stayed Egg ended

Superheater or steam chest; how connected to boiler rivetter single

DONKEY BOILER— Description *Upright circular, cross tubes*
 Made at *Gateshead* by whom made *Blanks Chapman & Co* when made *1884* where fixed *Stokehol*
 Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *1748* fire grate area *180'* description of safety
 valves *spring* No. of safety valves *one* area of each *110'* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler _____ length _____ description of riveting _____
 Thickness of shell plates _____ diameter of rivet holes _____ whether punched or drilled _____ pitch of rivets _____ lap of plating _____
 per centage of strength of joint _____ thickness of crown plates _____ stayed by _____
 Diameter of furnace, top _____ bottom _____ length of furnace _____ thickness of 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 plates _____ thickness of water tubes _____

Mark on Donkey Boiler

SPARE GEAR. State the articles supplied:— *One spare Crankshaft.*

One spare Propellershaft, One Slide valve spindle, 2 connecting rods top end bolts and nuts, 2 connecting rod bottom-end bolts and nuts, 2 main-bearing bolts, One set of coupling bolts, One set of feed and bilge pump valves, One set of piston springs, a quantity of assorted bolts and nuts, Iron of various sizes, 12 boiler tubes 18 condenser tubes, 1 Spare Propeller, etc.

*No 1748.
 Lloyd's Test
 150 to
 R.H.
 20.9.84.*

The foregoing is a correct description,
Matthews & Co Manufacturer.

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

The material and workmanship of Engines and Boilers is good. The Engines worked very well on the trial trips, and every thing was in good order. — I set the safety valves ten eighty pounds working pressure and they worked well. — It is my opinion that the Engines and boilers of the S.S. "Gayer Roll" is this day the 3rd of January, 1885, in a good safe working condition eligible to obtain the Mark + L.M.C. in the Register Book. —

It is submitted that this vessel is eligible to have the notification of L.M.C. recorded M 26/1/85

The amount of Entry Fee .. £ 2. : 0 : 0 received by me,
 Special £ 19 : 10 : 0 } £ 24.14.6
 Donkey Boiler Fee £ 2 : 2 : 0
 Certificate (if required) .. £ 0 : 2 : 6 *5th Jan 1885*
To be sent as per margin.
(Travelling Expenses, if any, £ 1.0.0)

E. H. H. H. H.

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

Committee's Minute

TUESDAY 27 JAN 1885
[Signature]



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