

REPORT ON MACHINERY

No. 1292

Received at London Office

23 MARCH

Date, first Survey March 3rd Last Survey November 17th 1888
(Number of Visits 10)

No. in Survey held at Flensburg
Reg. Book.

— on the S. S. Aglaia.

Master — Built at Flensburg By whom built Flensburger Schiffbau Ges. When built 1888
Engines made at Flensburg By whom made Flensburger Schiffbau Gesellschaft when made 1888
Boilers made at Flensburg By whom made Flensburger Schiffbau Gesellschaft when made 1888
Registered Horse Power 350 Owners Deutsche Dampfschiffahrtsgesellschaft Port belonging to Hamburg

ENGINES, &c.—

Description of Engines Triple Compound inverted Surface Condensing Screw on 3 cranks.
Diameter of Cylinders 24.36¹/₂ x 68¹/₂ Length of Stroke 45¹/₂ No. of Rev. per minute 62 Point of Cut off, High Pressure 6¹/₂ Int. 5 Low Pressure .5
Diameter of Screw shaft 13¹/₂ Diam. of Tunnel shaft 13¹/₂ Diam. of Crank shaft journals 13¹/₂ Diam. of Crank pin 13¹/₂ size of Crank webs 10¹/₂ x 16¹/₂
Diameter of screw 16.9¹/₂ Pitch of screw 21¹/₂ No. of blades 4 state whether moveable no total surface 65 sq. ft.
No. of Feed pumps 2 diameter of ditto 4¹/₂ Stroke 30¹/₂ Can one be overhauled while the other is at work yes.
No. of Bilge pumps 2 diameter of ditto 4¹/₂ Stroke 30¹/₂ Can one be overhauled while the other is at work yes.
Where do they pump from Engine bilge, all holds, tunnel, tanks and sea, deliver overboard to on deck.
No. of Donkey Engines 2 Size of Pumps a 10¹/₂ diam 10¹/₂ stroke b 10¹/₂ diam 10¹/₂ stroke Where do they pump from a. from Sea, Engine bilge, all holds, tunnel, and tanks, delivers overboard through condenser; b. from hotwell, Sea, Engine bilge, all holds & tanks and tunnel, delivers into all Boilers and overboard to 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 always fitted
No. of bilge injections 2 and sizes 2.5¹/₂ 6.2¹/₂ Are they connected to condenser, or to circulating pump a. to circulating pump, b. to condenser
How are the pumps worked By levers from crosshead of H.P. Engine.
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 above.
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 forward hold to tank sections How are they protected by wooden boxes
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 on the stocks before launch.
Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from main deck platform.

BOILERS, &c.—

Number of Boilers 4 Description Cylindrical multitubular Whether Steel or Iron Steel and Iron (0)
Working Pressure 165 lbs. Tested by hydraulic pressure to 330 lbs. Date of test 2 Boilers October 15th 1888
2 lbs. " 30 lbs. "
Description of superheating apparatus or steam chest none fitted
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 30.3 Description of safety valves Spring No. to each boiler 2
Area of each valve 5 sq. ft. 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 15¹/₂ Diameter of boilers 12¹/₂
Length of boilers 8¹/₂ description of riveting of shell long. seams double butt str. treble riv. circum. seams lap treble riveted Thickness of shell plates 1¹/₂
Diameter of rivet holes 1¹/₂ whether punched or drilled drilled pitch of rivets 3⁷/₁₆ Lap of plating 8³/₈
Per centage of strength of longitudinal joint 84.6% working pressure of shell by rules 183 lbs. size of manholes in shell 12¹/₂ x 16¹/₂
Size of compensating rings 8¹/₂ x 1¹/<sub>4 No. of Furnaces in each boiler 2 corrugated.
Outside diameter 3.9¹/₂ length, top 5.7¹/₂ bottom 7.11¹/₂ thickness of plates 19/32¹/₂ description of joint welded if rings are fitted no
Greatest length between rings — working pressure of furnace by the rules 167 lbs. combustion chamber plating, thickness, sides 19/32¹/₂ back 19/32¹/₂ top 19/32¹/₂
Pitch of stays to ditto, sides 7/16¹/₂ back 7/16¹/₂ top 7/2¹/₂ If stays are fitted with nuts or riveted heads with nuts working pressure of plating by rules 174 lbs. Diameter of stays at smallest part 13/16¹/₂ working pressure of ditto by rules 181 lbs. end plates in steam space, thickness 1¹/₂
Pitch of stays to ditto 16¹/₂ how stays are secured double nuts & washers working pressure by rules 160 lbs. diameter of stays at smallest part 23/4¹/₂ iron working pressure by rules 198 lbs. Front plates at bottom, thickness 3/4¹/₂ Back plates, thickness 1/8¹/₂
Greatest pitch of stays 12¹/₂ working pressure by rules 163 lbs. Diameter of tubes 3¹/₂ pitch of tubes 4¹/₂ thickness of tube plates, front 15/16¹/₂ back 7/8¹/₂ how stayed stay tubes pitch of stays 8¹/₂ x 8¹/₂ width of water spaces 7¹/₂
Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. of rivet holes —
Pitch of rivets — working pressure of shell by rules — 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 — how stayed —
Superheater or steam chest; how connected to boiler —</sub>



Lloyd's Register
Foundation

DONKEY BOILER - Description cylindrical, horizontal, multi-tubular with 2 furnaces. Steel
 Made at Flensburg by whom made Flensburger Schiffbau Ges. when made 1888 were fixed in a steamer.
 Working pressure 165 lbs. tested by hydraulic pressure to 330 lbs. No. of Certificate Oct. 15-88 fire grate area 18 sq. ft. description of safety
 valves Spring No. of safety valves 2 area of each $1\frac{1}{4}$ sq. in if fitted with easing gear yes if steam from main boilers can
 enter the donkey boiler yes diameter of donkey boiler 9 $\frac{1}{2}$ in length 6 $\frac{1}{2}$ ft 10 $\frac{3}{4}$ in description of riveting double butt strap triple riveted
 Thickness of shell plates $\frac{15}{16}$ in diameter of rivet holes 1 $\frac{1}{2}$ in whether punched or drilled drilled pitch of rivets 4 $\frac{5}{8}$ in lap of plating $\frac{1}{2}$ in
 per centage of strength of joint 79% thickness of crown plates $\frac{1}{8}$ in top stayed by $\frac{1}{8}$ in bottom stayed by $\frac{1}{8}$ in
 Length of furnace, top 4 $\frac{1}{2}$ in bottom 6 $\frac{1}{2}$ in diameter of furnace 31 in thickness of plates $\frac{5}{8}$ in description of joint welded
 Thickness of furnace crown plates $\frac{9}{16}$ in stayed by screw stays $\frac{1}{2}$ in thread, $\frac{3}{4}$ in pitch working pressure of shell by rules 176 lbs.
 Working pressure of furnace by rules 161 lbs. diameter of uptake — thickness of plates $\frac{1}{8}$ in thickness of water tubes $2\frac{3}{4}$ in

SPARE GEAR. State the articles supplied:— 1 propeller, $\frac{1}{3}$ crank shaft, 1 propeller shaft, 1 air & circulating pump rod, 1 valve spindle to fit all valves, 1 pair brasses conn. rod top & bottom end, 1 set valves for air, circulating, feed, edge & donkey pump, 1 set springs for safety and escape valves, 1 set piston bolts for each piston, 2 bolts for main bearings, conn. rod top & bottom end each, 1 set coupling bolts, 40 Boiler tubes, 10 ft. for Donkey Boiler, 30 Lammars tubes & 20 ft. screw glands, 1 set fore bars for each Boiler, bolts and nuts assorted, bar- and plate iron of various sizes and many more minor parts of Engines.

The foregoing is a correct description,

Flensburger Schiffbau-Gesellschaft. Manufacturer.

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

of the Engines and Boilers of this vessel are of first class quality, construction and outfit ample and substantial. I attended a very
 sea trial trip when the Engines went at 64 revolutions
 per minute and indicated abt. 1550 H.P., the vacuum standing at
 27 in. and the Boilers producing ample steam. The Donkey Boiler
 arranged in manner that it can be used in connection with
 the Main Boilers at sea.

I beg to recommend that this vessel be classed in the Register Book and that **L.M.C.** be entered.

It is submitted that this
 vessel is eligible to have
 L.M.C. 11.88 recorded

Ad

26.11.88

The amount of Entry Fee £ 3: 0: 0 received by me,
 Special £ 34: 10: 0
 Donkey Boiler Fee £ 2: 2: 0 $\frac{1}{2} 2.7.0$ {
 Certificate (if required) £ 5: 0 19/11 1888
 To be sent as per margin.

(Travelling Expenses, if any, £ 9. 10. 0)

Committee's Minute

TUES 4 DEC 1888

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

W. B. Boscawen.

