

Supplementary Sheet of Particulars of Wing boilers. REPORT ON MACHINERY.

No. 2825

Apr. 11/85

Port of MIDDLESBROUGH-ON-TEES.

FRI. MAY 25 1900

No. in Survey held at Middlesbrough-on-tees. Date, first Survey 1st August 1899 Last Survey 13th March 1900
 of tenseg. Book. 421 on the steel screw steamer "Warburg"
 Master J. Von Binger Built at W. Hartlepool By whom built Furness, Withy & Co. Ltd. When built 1900.
 Engines made at Middlesbrough-on-tees By whom made Sir C. Furness, Withy & Co. Ltd. when made 1900.
 Registered Horse Power 3971.17 Owners Hordentlicher Lloyd Port belonging to Bremen
 Com. Hors. Power as per Section 28 Is Refrigerating Machinery fitted Is Electric Light fitted

Engines, &c.—Description of Engines				No. of Cylinders	No. of Cranks
Dia. of Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft	as per rule	Lgth. of stern bush
Dia. of Tunnel shaft	Dia. of Crank shaft journals	Dia. of Crank pin	Size of Crank webs	as fitted	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		

WING OILERS, &c. 16 BLACK. 1 RED. (Letter for record S.) Total Heating Surface of Boilers 12104 12125 Is forced draft fitted yes.
 No. and Description of Boilers 2 cyl. built, single ended. Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.
 Date of test 5.2.00 Can each boiler be worked separately yes. Area of fire grate in each boiler 54.3 No. and Description of safety valves to each boiler 2: Spring loaded Area of each valve 9.62 Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork to side bunkers Mean dia. of boilers 14.0 Length 12.0 Material of shell plates S.
 Thickness 1 5/16 Range of tensile strength 28-32 Are they welded or flanged no. Descrip. of riveting: cir. seams lap. long. seams butt. Straps yes.
 Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9 1/2 4 3/4 Lap of plates or width of butt straps 16 9/16 x 1 5/16
 Per centages of strength of longitudinal joint 88.3 Working pressure of shell by rules 203.64 Size of manhole in shell 16 x 12
 Size of compensating ring 34 1/2 x 29 x 1 5/16 No. and Description of Furnaces in each boiler 3: Right hand. Material S. Outside diameter 44 1/2
 Length of plain part 8 1/3 Thickness of plates 9 1/16 Description of longitudinal joint 3: welded No. of strengthening rings 1
 Working pressure of furnace by the rules 198. Combustion chamber plates: Material S. Thickness: Sides 19 1/32 Back 19 1/32 Top 19 1/32 Bottom 1 7/16
 Pitch of stays to ditto: Sides 7 3/8 x 4 Back 7 3/8 x 4 Top 7 3/8 x 4 If stays are fitted with nuts or riveted heads nuts. Working pressure by rules 203.
 Material of stays S. Diameter at smallest part 1 3/8 Area supported by each stay 60 Working pressure by rules 199.3 End plates in steam space:
 Material S. Thickness 1 7/16 Pitch of stays 15 x 15 How are stays secured S. & W. Working pressure by rules 237.6 Material of stays S.
 Diameter at smallest part 2 1/2 Area supported by each stay 225 Working pressure by rules 224.4 Material of Front plates at bottom S.
 Thickness 3 1/4 Material of Lower back plate S. Thickness 1 3/16 Greatest pitch of stays 13 x 7 3/4 Working pressure of plate by rules 199.2
 Diameter of tubes 2 1/2 Pitch of tubes 3 3/4 x 3 3/4 Material of tube plates S. Thickness: Front 27 1/32 Back 27 1/32 Mean pitch of stays 4 1/2
 Pitch across wide water spaces 13 1/2 Working pressures by rules 13.453.6 Girders to Chamber tops: Material S. Depth and thickness of girder at centre 8 1/2 x 1 1/2 Length as per rule 29 Distance apart 4 3/8 Number and pitch of Stays in each 2: 7 3/8
 Working pressure by rules 223.8 Superheater or Steam chest; how connected to boiler how Can the superheater be shut off and the boiler worked separately yes
 Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet holes yes
 Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes
 If stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes
 Working pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

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 Dia. of rivet holes Whether punched or drilled Pitch of rivets

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

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:—

The foregoing is a correct description,
Manufacturer.

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

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

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

See accompanying sheet -

The amount of Entry Fee. £ : : When applied for,
Special £ : : 18
Donkey Boiler Fee . . . £ : : When received,
Travelling Expenses (if any) £ : : 18

Committee's Minute

Assigned

TUES. MAY 29 1900

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



Lloyd's Register
Foundation