

# REPORT ON WATER TUBE BOILERS.

No. 17315

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Date of writing Report 19 1930 When handed in at Local Office 13/11 19 30 Port of Antwerp

No. in Survey held at Seraing and Hoboken Date, First Survey 13th December 1929 Last Survey 31st October 1930

Reg. Bk. on the Steel Twin S. Turbine Steamer "Prince Charles" (Number of Visits) Tons 21,300 sq. ft. Boiler

Master Belgian Government Built at Hoboken By whom built Chantier naval J. Cockerill When built 1930-10

Engines made at Seraing By whom made H. A. M. J. Cockerill When made 1930-10

Boilers made at Seraing By whom made H. A. M. J. Cockerill When made 1930

Registered Horse Power \_\_\_\_\_ Owners Belgian Government Port belonging to Ostend

**WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.**—Manufacturers of Steel D. C. Cahill & Sons, Inglesham

(Letter for Record 5) Date of Approval of plan 4-7-29 Number and Description or Type 6 Babcock-Wilcox Type

No. of Certificate 82 Can each boiler be worked separately yes Working Pressure 370 lb Tested by Hydraulic Pressure to 605 lb Date of Test 7-4-30

Is forced draught fitted yes Area of fire grate (coal) in each Boiler fuel oil Total Heating Surface of Boilers 5,940 sq. ft. Boiler

Main and Auxiliary no No. and type of burners (oil) in each boiler 4 Babcock burners No. and description of safety valves on each boiler double spring loaded Area of each valve 3.85 sq. cm Pressure to which they are adjusted 370 lb

Are they fitted with easing gear yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler no

Smallest distance between boilers or uptakes and bunkers or woodwork \_\_\_\_\_ Height of Boiler \_\_\_\_\_ Width and Length \_\_\_\_\_

**Steam Drums:**—Number in each boiler one Inside diameter 3'0" Material of plates steel Thickness 1 1/16"

Range of Tensile Strength 28-32 tons Are drum shell plates welded or flanged no Description of riveting: \_\_\_\_\_

Cir. seams D.R. Lap long. seams D.R. D.B. St. Diameter of rivet holes in long. seams 3 1/32" Pitch of Rivets 3.7"

Lap of plate or width of butt straps 10 3/8" Thickness of straps 1/16" Percentage strength of long. joint:—Plate 73.8 Rivet 85.5

Diameter of tube holes in drum 4 3/4" Pitch of tube holes 7 1/2" Percentage strength of shell in way of tubes 84.3

If Drum has a flat side state method of staying \_\_\_\_\_ Depth and thickness of girders at centre \_\_\_\_\_

(if fitted) \_\_\_\_\_ Distance apart \_\_\_\_\_ Number and pitch of stays in each \_\_\_\_\_ Working pressure \_\_\_\_\_

by rules \_\_\_\_\_ **Steam Drum Heads or Ends:**—Material steel Thickness 1 3/16" Radius or how stayed 3'0"

Size of Manhole or Handhole 15" x 11" mud **Water Drums:**—Number in each boiler one Inside Diameter 6" x 6"

Material of plates steel Thickness 3/4" Range of tensile strength 24-28 tons Are drum shell plates welded or flanged Solid down Description of riveting:—Cir. seams \_\_\_\_\_ long. seams \_\_\_\_\_ Diameter of Rivet Holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plates or width of butt straps \_\_\_\_\_ Thickness of straps \_\_\_\_\_

Percentage strength of long. joint:—Plate \_\_\_\_\_ Rivet \_\_\_\_\_ Diameter of tube holes in drum 4 3/4" Pitch of tube holes 7 1/2"

Percentage strength of drum shell in way of tubes 42.2 mud **Water Drum Heads or Ends:**—Material steel Thickness 3/4"

Radius or how stayed Flat Size of manhole or handhole \_\_\_\_\_ **Headers or Sections:**—Number 24 pairs for boiler

Material steel Thickness 1/2" Tested by Hydraulic Pressure to 605 lb Material of Stays \_\_\_\_\_

Area at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working Pressure by Rules 506 lb Tubes:—Diameter 4" x 1 1/16"

Thickness 4 3/16" Number 17 750 **Steam Dome or Collector:**—Description of Joint to Shell \_\_\_\_\_

Percentage strength of Joint \_\_\_\_\_ Diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_

Description of longitudinal joint \_\_\_\_\_ Diameter of Rivet Holes \_\_\_\_\_ Pitch of Rivets \_\_\_\_\_ Working Pressure of shell \_\_\_\_\_

by Rules \_\_\_\_\_ **Crown or End Plates:**—Material \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

**SUPERHEATER.** Type Babcock & W. Date of Approval of Plan 4-7-29 Tested by Hydraulic Pressure to 605 lb

Date of Test 7-4-30 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler yes

Diameter of Safety Valve 3 1/4" Pressure to which each is adjusted 368 lb Is easing gear fitted yes

Is a drain cock or valve fitted at lowest point of superheater yes Number, diameter, and thickness of tubes 110 of 1 1/2" x 8 lb S.C.

Spare Gear. Tubes 100-46 1/2" Gaskets or joints:—Manhole 24 Handhole 146 of 1 1/2" Handhole plates 32 for 13"

2 safety valve springs 4 tubes for superheater 6 furnace manholes 10 burners

The foregoing is a correct description, SOCIETE ANONYME JOHN COCKERILL Manufacturer.

Dates of Survey: During progress of work in shops: 13/12/29 - 4/2/30 - 27/3/30 - 7/4/30 Is the approved plan of boiler forwarded herewith yes

while building: During erection on board vessel: 18-30/30 - 5-23/30 - 2-30/30 - 3-14-23-25-31/30

Total No. of visits 15

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These boilers have been made under special survey, and the materials have been tested by the Society's surveyors. The materials and workmanship are good. The boilers satisfactorily fitted in the vessel and afterwards tried under steam together with the superheaters, also tested for accumulation. The machinery of this vessel is in good condition, and eligible in my opinion to have the record of S.M.C. but so in the Society's Register Book (fitted for oil fuel, flared joint) above 150°F.

Survey Fee ... £ \_\_\_\_\_ When applied for, \_\_\_\_\_

Travelling Expenses (if any) £ first entry When received, \_\_\_\_\_

J. L. P. Dabney  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 21 NOV 1930

Assigned See other J.E. Rpt Ant 17315

