With Danzig First Entry Rpt. No. 154

Rpt. 5c.

REPORT ON WATER TUBE BOILERS.

No. 247

Received at London Office MAY 13 1938

Date of writing Report 7th May 1938. When handed in at Local Office 9th May 1938 Port of Düsseldorf

No. in Reg. Bk. Survey held at Oberhausen Date, First Survey 12th July, 1937 Last Survey 3rd May. 1938 (Number of Visits 17)

for the Drag Suction Hopper Dredger "Fu Shing" (Yard No. 1400) Tons { Gross / Net

Master Built at Danzig By whom built F. Schichau G.m.b.H. When built 1938

Engines made at Elbing By whom made F. Schichau G.m.b.H. When made 1938

Boilers made at Oberhausen By whom made Deutsche Babcock & Wilcox Dampfkessel W. When made 1937/38

Registered Horse Power Owners Whangpoo Conservancy Board Port belonging to Shanghai

WATER TUBE BOILERS—MAIN, ~~AUXILIARY, OR DONKEY~~.—Manufacturers of Steel plates:- Deutsche Röhrenwerke, Mannesmannröhren-Werke; tubes:- Thyssen Walzwerk, D. Röhrenwerke, Mannesmann; (Letter for Record) Date of Approval of plan 25/5, 25/6, 11/8, 10/12.37, 8/3.38 **Number and Description or Type of Boilers** 4 water tube boilers Working Pressure 245 lbs.sq.in. (17.2 atm) (of Welded Drums) 225 lb. for engines Tested by Hydraulic Pressure to 420 lbs.sq.in. (29.5 atm) 3970 - 13880 Date of Test 18.10.37

No. of Certificate of welded drums 21976 Can each boiler be worked separately **Total Heating Surface of Boilers** 4x739 sq.ft. (4x409 m²)

Is forced draught fitted **Area of fire grate (coal) in each Boiler** Total grate area of boilers in vessel including Main and Auxiliary No. and type of burners (~~oil~~) in each boiler Emitt stokers No and description of safety valves on each boiler 1 double lift spring safety valve Area of each valve 2x5541,77 mm² Pressure to which they are adjusted

Are they fitted with easing gear In case of donkey boilers state whether steam from main boilers can enter the donkey boiler

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 1052 mm Material of plates S. M. Steel Thickness 27 mm

Range of Tensile Strength 44 - 50.3 kgs/mm² Are drum shell plates welded ~~or flanged~~ electric fusion also autog. Description of riveting:—

Cir. seams long. seams Diameter of rivet holes in long. seams Pitch of Rivets

Lap of plate or width of butt straps Thickness of straps Percentage strength of long. joint:—Plate Rivet

Diameter of tube holes in drum 102.7 mm Pitch of tube holes 178 mm Percentage strength of shell in way of tubes

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 S. M. Steel Thickness 23 mm Radius ~~or how stayed~~ curvature 880 mm

Size of Manhole ~~or Handhole~~ 300 x 400 mm **Water Drums:**—Number in each boiler Inside Diameter

Material of plates Thickness Range of tensile strength Are drum shell plates welded or flanged 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 Pitch of tube holes

Percentage strength of drum shell in way of tubes **Water Drum Heads or Ends:—Material** Thickness

Radius or how stayed Size of manhole or handhole **~~Headers~~ or Sections:**—Number 4 x 48

Material S. M. Steel Thickness 14 mm Tested by Hydraulic Pressure to Material of Stays

Area at smallest part Area supported by each stay Working Pressure by Rules **Tubes:**—Diameter 44.5 102 mm

Thickness 3.5, 4.0, 5.25, 6.5 mm Number 4 x 824 **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 Date of Approval of Plan 23.6.37. Single coils Tested by Hydraulic Pressure to 80 atm.

Date of Test 19. 11. 37. Is a safety valve fitted to ~~each section of~~ the superheater which can not be shut off from the Boiler yes

Diameter of Safety Valve 84 mm Pressure to which each is adjusted Is easing gear fitted

Is a drain cock or valve fitted at lowest point of superheater Number, diameter, and thickness of ~~tubes~~ coils:- 4x40, 38 mm Ø, 3,75 mm thickness

Spare Gear. Tubes Gaskets or joints:—Manhole Handhole Handhole plates

DEUTSCHE BABCOCK & WILCOX DAMPFKESSEL-WERKE ACTIEN-GESELLSCHAFT Die Betriebsleitung

The foregoing is a correct description,

G. Fischer Manufacturer.

Dates of Survey while building { During progress of work in shops - - / During erection on board vessel - - - } Is the approved plan of boiler forwarded herewith

Total No. of visits

GENERAL REMARKS (*State quality of workmanship, opinions as to class, &c.*)

The electric fusion welded boiler drums have been surveyed during manufacturing and have been made in accordance with the "Requirements for welded Pressure Vessels" (Class I) and the approved plan № 64283 (Date of approval 25th May, 1937)

Survey Fee ... ... £ RM 1060.— When applied for, 6. 5. 1938 Dünnebier

Travelling Expenses (if any) £ " : 110.— When received, 23. 6. 1938 № 11321

1/5 of the fees credited to Danzig account

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 28 FEB 1939

Assigned See Danz. F.E. 154

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