

REPORT ON WATER TUBE BOILERS.

No. 2576

Received at London Office 6 AUG 1935

Writing Report 29th July 1935 When handed in at Local Office 1st August 1935 Port of Barrow
 in Survey held at Barrow Date, First Survey 7th June 1934 Last Survey 25th July 1935
 on the V.L.S. "Orion" (Vickers-Armstrongs Ltd No 697) Number of Visits 39 Tons { Gross 23371
 Built at Barrow By whom built Vickers-Armstrongs Ltd When built 1935
 Made at Barrow By whom made Vickers-Armstrongs Ltd When made 1935
 Owners Orient Steam Navigation Co Ltd Port belonging to London
 Horse Power 4912

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel English Steel Corporation, A. Colville & Co. Ltd

For Record S Date of Approval of plan 2/3/34, 22/3/34, 24/4/34 Number and Description or Type
 Boilers Four Babcock & Wilcox type Working Pressure 450 lb Tested by Hydraulic Pressure to 425 lb Date of Test 1st & 2nd March
 of Certificate H58 & H59 Can each boiler be worked separately Yes Total Heating Surface of Boilers 29860 sq ft
 Draught fitted Yes Area of fire grate (coal) in each Boiler 100 sq ft Total grate area of boilers in vessel including
 and Auxiliary Yes No. and type of burners (oil) in each boiler See Walsland-Kowden No. and description of safety valves on
 boiler double spring loaded high lift Area of each valve 4.0686 sq ft Pressure to which they are adjusted 450 lb
 Key fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler Yes
 Least distance between boilers or uptakes and bunkers or woodwork 20'-9" Height of Boiler 20'-9" Width and Length 14'-8" x 20'-10"
 in Drums:—Number in each boiler One Inside diameter 3'-6" Material of plates Mild steel forging Thickness 1 7/8"
 of Tensile Strength 28/32 ton Are drum shell plates welded or flanged No Description of riveting:—
 seams Dr. lap long. seams Forging Diameter of rivet holes in long. seams Yes Pitch of Rivets Yes
 of plate or width of butt straps Yes Thickness of straps Yes Percentage strength of long. joint:—Plate Yes Rivet Yes
 Diameter of tube holes in drum 4 1/8" Pitch of tube holes 7/4" Percentage strength of shell in way of tubes H3.1%
 Drum has a flat side state method of staying Yes Depth and thickness of girders at centre
 fitted) Yes Distance apart Yes Number and pitch of stays in each Yes Working pressure
29 rules Yes Steam Drum Heads or Ends:—Material Steel Thickness 1 1/16" Radius or how stayed 3'-0"
 of Manhole or Handhole 15" x 11" Material of plates Steel SA Thickness 3/4 nominal Range of tensile strength 26/30 ton Are drum shell plates welded
 flanged Yes Description of riveting:—Cir. seams Yes long. seams Yes Diameter of Rivet Holes in
5-31 seams Yes Pitch of rivets Yes Lap of plates or width of butt straps Yes Thickness of straps Yes
2761 Percentage strength of long. joint:—Plate Yes Rivet Yes Diameter of tube holes in drum Yes Pitch of tube holes
170 Percentage strength of drum shell in way of tubes Yes Water Drum Heads or Ends:—Material Yes Thickness Yes
 how or how stayed Yes Size of manhole or handhole Yes Headers or Sections:—Number 360 total
 Material Steel SA Thickness 7/16 nominal Tested by Hydraulic Pressure to 425 lb Material of Stays Yes
 at smallest part Yes Area supported by each stay Yes Working Pressure by Rules 450 lb Tubes:—Diameter 1 3/4"
 thickness 4 x 9 L59 Number 1355 Steam Dome or Collector:—Description of Joint to Shell Yes
 Percentage strength of Joint Yes Diameter Yes Thickness of shell plates Yes Material Yes
 Description of longitudinal joint Yes Diameter of Rivet Holes Yes Pitch of Rivets Yes Working Pressure of shell
 Rules Yes Crown or End Plates:—Material Yes Thickness Yes How stayed Yes

SUPERHEATER. Type Babcock Interdahl Date of Approval of Plan 18/6/34 Tested by Hydraulic Pressure to 725 lb
 Date of Test 19/10/34, 6/11/34, 9/11/34 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" Pressure to which each is adjusted 440 lb Is easing gear fitted Yes
 Drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes 48-1 1/2"-8 L59
 Easing Gear. Tubes 227 Gaskets or joints:—Manhole 100% Handhole 100% Handhole plates 30 in Hand Drum 10 in 10 in plates
6 of each length for Superheater For.

VICKERS-ARMSTRONGS LTD. The foregoing is a correct description,
A. Mitchell Manufacturer.

During progress of work in shops:—June 7, 19, 29, July 23, 24, Sept 4, 7, 15, Oct 2, 4, 10, 19, 22 Is the approved plan of boiler forwarded herewith Yes
 During erection on board vessel:—Nov. 6, 9, 26—Decr. 11, Jan. 7, 28, Feb. 21, 22, 26, Mar. 5
8, Apr. 8, 12, 17, May 1, 15, 21, June 1, 4, 5, 17, July 2, 4, 8, 10, 15 Total No. of visits 39

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special Survey to the Approved Plans and the Rules. They have been efficiently mounted, tested and fitted on board and their safety valves adjusted under steam. (Please also see Glasgow Report No 55209)

Survey Fee ... Included in When applied for, 1st Aug 1935
 Travelling Expenses (if any) None When received, 2nd Aug 1935

Committee's Minute FRI, 9 AUG 1935 TUE, 13 AUG 1935
 signed See Rev. JG 2576 Engineer Surveyor to Lloyd's Register of Shipping.

