

## REPORT ON WATER TUBE BOILERS. No. 6991

Received at London Office

Writing Report 29.1.1959 When handed in at Local Office 19 Port of Helsingfors  
 in Survey held at Helsingfors Date, First Survey 21.8.58 Last Survey 21.1.1959  
 Book for diesel electric icebreaker "MOSKVA" (Number of Visits 6) Gross Tons 365  
 at Helsingfors, Finland By whom built Wärtsilä-koncernen A/B Yard No. 365 When built 1959  
 es made at Helsingfors, Finland By whom made Engine No. 2795 When made 1959  
 s made at Helsingfors, Finland By whom made (Wärtsilä-koncernen A/B Maskin och Bro Boiler No. 2795 When made 1959  
 r Register Book 1400 Owners Port belonging to Phoenix = Rheinrohr A.G. etc.

WATER TUBE BOILERS MAIN AUXILIARY, OR DONKEY. Manufacturers of Steel 21.10.1957, Drawing No. 1M36104/A No. and Description or Type  
 of Approval of plan B&W Marine Water Tube Boiler Working Pressure 10 kg/cm<sup>2</sup> Tested by Hydraulic Pressure to 18 kg/cm<sup>2</sup> Date of Test 21.1.1959  
 of Certificate 10 Can each boiler be worked separately Yes Total Heating Surface of Boilers 130 m<sup>2</sup> Superheaters -  
 Economisers - Is forced draught fitted No Area of Fire Grate (coal) in each Boiler oil fired  
 and type of burners (oil) in each boiler one

No. and description of safety valves on boiler one, 2 x 70 double spring loaded Area of each set of valves per boiler { per rule 70.28 cm<sup>2</sup> as fitted 77 cm<sup>2</sup> Pressure to which they are adjusted 10 kg/cm<sup>2</sup> Are they fitted with easing gear yes In case of donkey boilers state whether steam from main boilers can enter donkey boiler No main Blr Smallest distance between boilers or uptakes and bunkers or woodwork Height of boiler 914 mm

th and length Steam Drums: Number in each boiler one Inside diameter 41-47 kg/mm<sup>2</sup> Are drum shell plates welded thickness of plates 18 mm Range of tensile strength 41-47 kg/mm<sup>2</sup> Have all the requirements of the Rules

anged welded If fusion welded, state name of welding firm Wärtsilä-koncernen A/B Maskin och Bro Description of riveting: Circ. seams long. seams Class I vessels been complied with yes

meter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of long. joint: Plate Rivet Diameter of tube holes in drum 25.4/38.4 mm Pitch of tube holes 38.8/59 mm

percentage strength of shell in way of tubes 34% Steam Drum Heads or Ends: Range of tensile strength 41-47 kg/mm<sup>2</sup> Water Drums: Number thickness of plates 16 mm Radius or how stayed r = 95 mm Size of manhole or handhole 300 x 400 mm Are drum shell plates

each boiler one Inside diameter 328 mm Thickness of plates 20 mm Range of tensile strength 41-47 kg/mm<sup>2</sup> Have all the requirements of the Rules led or flanged seamless If fusion welded, state name of welding firm Description of riveting: Circ. seams long. seams

Class I vessels been complied with yes Pitch of rivets Thickness of straps Percentage strength of long. joint: Plate Rivet Diameter of tube holes in drum 25.4/38.4 mm Pitch of tube holes 38.8/59 mm

percentage strength of drum shell in way of tubes 34% Water Drum Heads or Ends: Range of tensile strength 41-47 kg/mm<sup>2</sup> Size of manhole or handhole 105/121 mm thickness of plates 13 mm Radius or how stayed r = 65, R = 328 mm Tested by hydraulic pressure to

aders or Sections: Number Material Thickness Number 576 and 95 mm Steam Dome or Collector: Description of Diameter inside 19/31 mm Thickness 3/3.5 mm Range of tensile

st to shell Inside diameter Thickness of shell plates If fusion welded, state name of welding Description of longitudinal joint Have all the requirements for the Rules for Class I vessels been complied with Diameter of rivet holes

ch of rivets Thickness of straps Percentage strength of long. joint plate rivet own or End Plates: Range of tensile strength Thickness Radius or how stayed

UPERHEATER, Drums or Headers: Number in each boiler No superheater Inside diameter 20.2.59 Are drum shell plates welded thickness Material Range of tensile strength Have all the requirements of the Rules

flanged If fusion welded, state name of welding firm Description of riveting: Circ. seams long. seams Class I vessels been complied with Description of riveting: Circ. seams long. seams

iameter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of long. joint: Plate Rivet Diameter of tube holes in drum Pitch of tube holes Percentage strength of

um shell in way of tubes Drum Heads or Ends: Thickness Range of tensile strength Number, diameter, and thickness of tubes Is a safety valve fitted to each section of the superheater which

sted by hydraulic pressure to Date of test Area of each set n be shut off from the boiler No. and description of safety valves Is easing gear fitted

valves Pressure to which they are adjusted Has the spare gear required by the Rules been supplied The foregoing is a correct description, Wärtsilä-koncernen A/B, Maskin och Bro Manufacturer.

Dates During progress of work in shops 21.8.58-21.1.59 Is the approved plan of boiler forwarded herewith yes Survey while During erection on board vessel - - - Total No. of visits

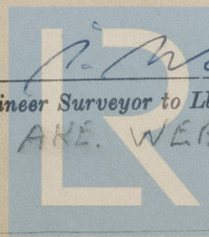
this boiler a duplicate of a previous case no If so, state vessel's name and report No. GENERAL REMARKS (State quality of workmanship, opinions as to class, &c. Material and workmanship found good. Boiler found fit for class subject to steam trial being carried out with satisfactory result.

Survey Fee ... Fmk. £ 27.000:- When applied for 19 Travelling Expenses (if any) £ When received 19 The fee will be applied for upon the return of the attached Certificate No. 10.

Date FRIDAY 14 OCT 1960 See Rpt. 1

Committee's Minute

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AKE. WEBER

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