

VED  
pt. 5c.

# REPORT ON WATER TUBE BOILERS

No. 23459  
OCT 1948

Received at London Office

Date of writing Report **28<sup>th</sup> SEPT 1948** When handed in at Local Office **1<sup>st</sup> OCT. 1948** Port of **GREENOCK**

No. in Survey held at **GREENOCK** Date, First Survey **3<sup>rd</sup> MARCH 1948** Last Survey **8<sup>th</sup> SEPTEMBER 1948**

Reg. Book. on the **T.S.S. "GEMMA"** (Number of Visits **13**) Gross Tons **1949** Net Tons **1949**

Built at **Sunderland** By whom built **J. L. Thompson & Co. Ltd** Yard No. **663** When built **1949**

Engines made at **Southbank** By whom made **Smith's Dock Co. Ltd** Engine No. **650** When made **1949**

Boilers made at **GREENOCK** By whom made **Babcock & Wilcox Ltd** Boiler No. **349** When made **1948**

Nominal Horse Power **730 M.N.** Owners **Anglo-Saxon Petroleum Co. Ltd.** Port belonging to **Hanger**

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel **Babcock & Wilcox supply**

Date of Approval of plan **Steam & Water drum 24/4/47** Pressure parts, details of Headers, Drums **27/5/47** No. and Description or Type of Boilers **Two W.T. B.W. type** Working Pressure **220** Tested by Hydraulic Pressure to **380 lb/sq** Date of Test **22.6.49**

No. of Certificates **7274, 7275** Can each boiler be worked separately **Yes** Total Heating Surface of Boilers **10640** **Not checked**

Is forced draught fitted **Yes** Area of Fire Grate (coal) in each Boiler **✓**

No. and type of burners (oil) in each boiler **Swinnery Bros (import) Smith's** No. and description of safety valves on each boiler **1 - 3 1/2" Double High Lift** Area of each set of valves per boiler **as fitted 19.24 sq"** Pressure to which they are adjusted **22.5 lb/sq** Are they fitted with easing gear **yes** 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 2'** Height of boiler **3'-6"**

Width and length **Drum 9 1/2" tube plate 1 1/8"** Steam Drums:—Number in each boiler **One** Inside diameter **3'-6"** Are drum shell plates welded or flanged **No** If fusion welded, state name of welding firm **Not welded** Have all the requirements of the Rules for Class I vessels been complied with **DR. DBS**

Description of riveting:—Circ. seams **DR.** long. seams **DR. DBS** Percentage strength of long. joint:—Plate **74.7** Rivet **96.77** Diameter of tube holes in drum **4.056"** Pitch of tube holes **7"** Percentage strength of shell in way of tubes **42.87** Steam Drum Heads or Ends:—Range of tensile strength **36/30 Tons** Thickness of plates **7/8"** Radius or how stayed **3'-0"** Size of manhole or handhole **16" x 12"** Water Drums:—Number in each boiler **None** Are drum shell plates welded or flanged **Yes** If fusion welded, state name of welding firm **Not welded** Have all the requirements of the Rules for Class I vessels been complied with **DR. DBS**

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Headers or Sections:—Number **29 on boiler** Material **Weldless** Thickness **1 1/2"** Tested by hydraulic pressure to **380 lb/sq** Tubes:—Diameter **1 1/8"** Thickness **9.2 10 w.g.** Number **114 on boiler** Steam Dome or Collector:—Description of joint to shell **None** Inside diameter **None** Thickness of shell plates **None** Range of tensile strength **None** Description of longitudinal joint **None** If fusion welded, state name of welding firm **None** Have all the requirements of the Rules for Class I vessels been complied with **DR. DBS** Diameter of rivet holes **None** Pitch of rivets **None** Thickness of straps **None** Percentage strength of long. joint **None** plate **None** rivet **None** Radius or how stayed **None** Crown or End Plates:—Range of tensile strength **None** Thickness **None** Inside diameter **None**

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Dates of Survey: During progress of work in shops (1948) **Mar. 3, 10, 11, 22, April 8, 15, 30, May 13, Aug. 6, 19, 20, 30, Sept. 8.** Is the approved plan of boiler forwarded herewith **No.**

while building: During erection on board vessel **None**

Total No. of visits **13** "GOMPHINA"

Is this boiler a duplicate of a previous case **Yes** If so, state vessel's name and report No. **Greenock FE N° 23533**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been constructed under special survey in accordance with the Rules & approved plans. The materials & workmanship are sound & good. The boilers when completed & tested will be eligible to be fitted in a vessel classed in the Society's Register book. They have been despatched to Smiths Dock Co. Middlesbrough to be installed in their** Contract N° **EW 663**

Survey Fee ... £ **113.14.0** (See 5<sup>th</sup> Dept 50 cover) When applied for **1<sup>st</sup> OCT. 1948**

Travelling Expenses (if any) £ **50.14.0** When received **19**

CREDIT { **GREENOCK** £ **28.8.6**  
**GLASGOW** £ **28.8.6**  
**MIDDLESBROUGH** £ **28.8.6**  
Date **5 OCT 1948**

Committee's Minute **Referred for completion**

**Charles J. Hunter**  
Engineer Surveyor to Lloyd's Register of Shipping.



The two steam drums (see Glasgow cert N<sup>o</sup> 66090) have now been drilled for mounting pads & the pads fitted & rivetted, the drums were then tested by hydraulic pressure 380 lbs/sq", found tight & sound. The tube holes were then drilled in the drums.

The Headers (see Glasgow cert N<sup>o</sup> 66091) have been assembled, tube fitted and expanded, each header on completion was tested by hydraulic pressure. The above parts together with the furnace framing & coverings, air heaters return tubes, Header nipple tubes & down corner tubes have been despatched to Smith's Dock Co. Middlesbrough for installation in their Contract EW663. Babcock & Wilcox of Renfrew will supply the mountings.

Charles J. Hunter

Glasgow Cert & copies N<sup>o</sup> 66090 & 66091 attached herewith

CJH

The erection of these boilers has been completed on board at Smith's Dock and they have been hydraulically tested to 380 lbs/sq" & found satisfactory. The boilers have been securely fitted & examined under working conditions & on completion the safety valves were adjusted to 225 lbs/sq"

E. Hawey