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pt. 5c.

REPORT ON WATER TUBE BOILERS

No. 23459
OCT 1948

Received at London Office

Date of writing Report 28th SEPT 1948 When handed in at Local Office 1st OCT. 1948 Port of GREENOCK
No. in Survey held at GREENOCK Date, First Survey 3rd MARCH 1948 Last Survey 8th SEPTEMBER 1948
Reg. Book. on the T.S.S. "GEMMA" (Number of Visits 13)
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, Arrows 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. in. Date of Test 22.6.49
No. of Certificates 7274, 7275 Can each boiler be worked separately. Yes Total Heating Surface of Boilers 10640 sq. ft. Checked
Is forced draught fitted. Yes Area of Fire Grate (coal) in each Boiler Swinney Bros (import) Smith's No. and description of safety valves on
No. and type of burners (oil) in each boiler O.E. Burning System. each boiler 1-3 1/2" Double High Lift Area of each set of valves per boiler as fitted 19.24 sq. in. Pressure to which they
are adjusted 22.5 lb/sq. in. 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 Steam Drums:—Number in each boiler One Inside diameter 3'-6"
Thickness of plates Drum 9/16" tube plate 1/16" Range of tensile strength 28/32 tons 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. Description of riveting:—Circ. seams D.R. long. seams D.R. DBS
Diameter of rivet holes in long. seams 3/32" Pitch of rivets 3.491" Thickness of straps 9/16" Percentage strength of
long. joint:—Plate 74.7 Rivet 96.777 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 Inside diameter Thickness of plates Range of tensile strength Are drum shell plates
welded or flanged. If fusion welded, state name of welding firm. Have all the requirements of the Rules
for Class I vessels been complied with. Description of riveting:—Circ. seams long. seams
Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps Pitch of tube holes
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:—Range of tensile strength
Thickness of plates Radius or how stayed Size of manhole or handhole Tested by hydraulic pressure to 380 lb/sq. in.
Headers or Sections:—Number 29 in boiler Material Mild steel Thickness 11/32" Steam Dome or Collector:—Description of
Tubes:—Diameter 1 1/16" Thickness 9/16" Number 114 in boiler Range of tensile strength
joint to shell Inside diameter Thickness of shell plates If fusion welded, state name of welding
strength Description of longitudinal joint Diameter of rivet holes
firm Have all the requirements for the Rules for Class I vessels been complied with. Diameter of rivet holes
Pitch of rivets Thickness of straps Percentage strength of long. joint plate rivet
Crown or End Plates:—Range of tensile strength Thickness Radius or how stayed
SUPERHEATER, Drums or Headers:—Number in each boiler Inside diameter
Thickness Material Range of tensile strength Are drum shell plates welded
or flanged. If fusion welded, state name of welding firm. Have all the requirements of the Rules
for Class I vessels been complied with. Description of riveting:—Circ. seams long. seams
Diameter 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
drum shell in way of tubes Drum Heads or Ends:—Thickness Range of tensile strength
Radius or how stayed Size of manhole or handhole Number, diameter, and thickness of tubes
Tested by hydraulic pressure to Date of test Is a safety valve fitted to each section of the superheater which
can be shut off from the boiler No. and description of safety valves Area of each set
of valves Pressure to which they are adjusted Is easing gear fitted
Spare Gear. Has the spare gear required by the Rules been supplied. The foregoing is a correct description.

Manufacturer.

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.

Total No. of visits

"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 Smith's Dock Co. Middlesbrough to be installed in their
Contract N° EW 663

Survey Fee ... £ 113.14.0 (See 5th Dept 50 cover) When applied for 1st OCT. 1948
Travelling Expenses (if any) £ 45.50.14.0 When received 19

CREDIT { GREENOCK 28.8.48
GLASGOW 28.8.48
MIDDLESBROUGH 28.8.48
Date OCT 1948

Committee's Minute Referred for
Confirmation

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

Lloyd's Register
Foundation
003926-003936-0265 1/2

The two steam drums (see Glasgow cert N°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°66091) have been assembled, tubes 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°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