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AUG 1948  
D.O.

# REPORT ON BOILERS.

No. 73112

Received at London Office 11 AUG 1948

Date of writing Report 19 When handed in at Local Office 9-8-1948 Port of Glasgow.

No. in Survey held at Reg. Book on the SS *BIOGRAPHER* Date, First Survey Jan 15th Last Survey July 1st 1948 (Number of Visits 24)

Yard No. 1029 Built at Greenock By whom built *Lithgow's Ltd* When built

Boilers made at Annan By whom made Cochran & Co, Annan Boiler No. 17520 When made 1948 Ltd.

Owners T. J. HARRISON Port belonging to LIVERPOOL

VERTICAL DONKEY BOILER— No. One Description Cochran Manufacturers of steel Colvilles Ltd.

Made at Annan By whom made Cochran & Co, Annan Ltd When made 1948 Where fixed Working pressure 105 lbs/sq. in.

tested by hydraulic pressure to 208 lbs/sq. in. Date of test 1-7-48 No. of Certificate 22710 Fire grate area 0. F Description of safety valves Double spring

No. of safety valves 2 Area of each 3.14 sq. in. Pressure to which they are adjusted If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler

Diameter of donkey boiler 5'-6" Length 14'-0" Material of shell plates S Thickness 1/2" x 7/16"

Range of tensile strength 28/32 tons Description of riveting long. seams D.R. lap Diameter of rivet holes 25/32" Whether punched or drilled drilled Pitch of rivets 2.69, 2.55 & 2.5" Lap of plating 3 7/8" Per centage of strength of joint Rivets 66.8 Working pressure of shell by rules 117 lbs/ sq. in. Thickness of shell crown plates 23/32" Radius of do. 2'-9" No. of stays to do. None Diameter of stays - Diameter of furnace—Top - Bottom 4'-9" Length of furnace - Thickness of furnace side plates 1/2" Description of joint seamless Working pressure of furnace by rules 144.7 Thickness of Ogee ring 23/32" Working pressure of Ogee ring by rules 114 lbs/ sq. in. Thickness of furnace crown plates 1/2" Radius of do. 2'-4.1/2" Stayed by Hemisphere Diameter of uptake 13" x 19.1/2" Thickness of uptake plates 9/16" Thickness of tube plates front 3/4" Mean pitch of stay tubes in nest 10.38" Pitch in outer vertical rows 8"

Diameter of tube holes FRONT stay 2.11/16" BACK stay 2 1/2" Working pressure of tube plates by rules F 109.5 lbs/sq. in. Tubes: Material Steel

External diameter plain 2.9/16" Thickness plain 2 1/2" No. of threads per inch 9 Pitch of Tubes 4" x 3.1/2"

Working pressure by rules 175 lbs/sq. in. Manhole compensation; Size of opening in shell plate 21" x 17" Section of compensating ring 7" x 1" No of rivets and diameter of rivet holes 40 @ 25/32" Outer raw pitch at ends 4"

The foregoing is a correct description, *SMB*  
 FOR COCHRAN & CO. ANNAN, LTD. Manufacturer.

Dates of Survey while building { During progress of work in shops - Jan. 15, 22, 29, Feb. 8, 12, 19, 26, March, 5, 11, 18, 25, April 1, 8, 15, Drawing No. 33703  
 { During erection on board vessel - 22, 29, May, 6, 13, 20, 27, June 3, 17, 25, July 1.  
 Total No. of Visits Is the approved plan of boiler forwarded herewith Yes.

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

This boiler has been constructed to the order of Messrs. D. Rowan & Co., Ltd., for their contract No. 1204 and has been despatched to Glasgow for installation.

The boiler has been constructed under Special Survey and in accordance with the approved plan.

The materials and workmanship are good.

*This donkey boiler has been efficiently installed in the vessel, tried under working conditions and the safety valves adjusted to 105 lbs/sq. in.*

*R. Shaw*  
 Glasgow.

Survey Fee ... £ 10 : 0 : 0 } MONTHLY ACCOUNT  
 Travelling Expenses (if any) £ : : } When applied for 19  
 When received 19

Committee's Minute GLASGOW 10 AUG 1948 *LM*  
 Assigned *Deferred for completion*

*W. H. ...*  
 Engineer Surveyor to Lloyd's Register of Shipping.

