Rpt. 5a.

REPORT ON BOILERS.

No. 65870

Received at London Office WED. APR. 15. 1914

Date of writing Report 8th April 1914 When handed in at Local Office APR 14 1914 Port of Newcastle on Tyne

No. in Reg. Book. Survey held at Newcastle Date, First Survey 3rd Sept 1913 Last Survey 1st April 1914 (Number of Visits 16)

72 Lufon the Donkey boiler for Twin S.S. "Elbruz" Tons Gross / Net

Master Built at Newcastle By whom built Tyne Iron S. B. Co When built 1914

Engines made at By whom made When made

Boilers made at Newcastle By whom made North Eastern Marine Eng Co When made 1914

Registered Horse Power Owners Soc. Anon d. Armements d. Industrie Port belonging to Antwerp

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY OR~~ **DONKEY.**—Manufacturers of Steel J. Spencer & Sons (Letter for record F) **Total Heating Surface of Boilers** 786 ☐' Is forced draft fitted Oil fuel **No. and Description of Boilers** 1 Single-ended **Working Pressure** 150 lbs Tested by hydraulic pressure to 300 lbs Date of test 31/10/13 No. of Certificate 8585 Can each boiler be worked separately ✓ **Area of fire grate in each boiler** Oil fuel No. and Description of safety valves to each boiler two direct Spring Area of each valve 4.909 sq inch Pressure to which they are adjusted 150 lbs 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 4'-6" from ~~Liquid~~ fuel bunker. Inside dia. of boilers 10'-1½" Length 10'-0"

Material of shell plates Steel Thickness ¾" Range of tensile strength 28¾-32 tons Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams d. r. lap long. seams t. r. d. butt Diameter of rivet holes in long. seams 1⅛" Pitch of rivets 6¼"

Lap of plates or width of butt straps 12" Per centages of strength of longitudinal joint rivets 94.6 plate 82.0 Working pressure of shell by rules 151 lbs Size of manhole in shell 16"×12" Size of compensating ring flanged **No. and Description of Furnaces in each Boiler** 2 plain Material Steel Outside diameter 34½" Length of plain part top 70" bottom 78" Thickness of plates crown 39/64" bottom

Description of longitudinal joint welded No. of strengthening rings ✓ Working pressure of furnace by the rules 150 lbs Combustion chamber plates: Material Steel Thickness: Sides 21/32" Back 21/32" Top 21/32" Bottom 21/32" Pitch of stays to ditto: Sides 9¾×10" Back 9¾"×10" Top 9¾"×10" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 152.5 lbs Material of stays iron ~~Diameter~~ area at smallest part 2.03 Area supported by each stay 97.5 ☐" Working pressure by rules 154.5 lbs End plates in steam space: Material Steel Thickness 31/32" Pitch of stays 19"×15⅛" How are stays secured d. n. & w Working pressure by rules 150 lbs Material of stays Steel ~~Diameter~~ area at smallest part 4.57 ☐" Area supported by each stay 287 ☐" Working pressure by rules 165 lbs Material of Front plates at bottom Steel Thickness 31/32" Material of Lower back plate Steel Thickness 31/32" Greatest pitch of stays 14½"×9¾" Working pressure of plate by rules 213 lbs Diameter of tubes 3" Pitch of tubes 4⅜"×4¼" Material of tube plates Steel Thickness: Front 31/32" Back ¾" Mean pitch of stays 8⅝" Pitch across wide water spaces 14½" Working pressures by rules 160 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8"×1½" Length as per rule 30" Distance apart 10" Number and pitch of Stays in each 2 of 9¾" Working pressure by rules 160 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓ If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓ Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING CO., LTD.

G. Stanniron Manufacturer.

Secretary.

Dates of Survey while building — During progress of work in shops: 1913 Sept 3.11.17.24.26 Oct 3.31 Nov 3.23 — During erection on board vessel: Nov 26 1914 Feb 11.25 Mar 7.16.18 Apl 1 — Is the approved plan of boiler forwarded herewith — Total No. of visits 16

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

This boiler has been built under special survey the materials used are good, and the workmanship is satisfactory

Survey Fee ... ... £ 2 : 2 :
Travelling Expenses (if any)) £ : :

When applied for, APR 14 1914 191
When received, 25/4/ 191 4

Charles Cooper
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. JUL. 24. 1914

Assigned See minute on fc. 1pl attached

FRI. OCT. 16. 1914
TUE. SEP. 28. 1915
FRI. 16 JUN. 1916
FRI. 22 DEC. 1916
WED. 11 APR. 1917
FRI. OCT. 5 1917
FRI. 11 JAN. 1918
TUE. NOV. 25. 1919

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W1232-0100