

REPORT ON BOILERS.

No. 41146

Received at London Office

27 AUG 1930

Date of writing Report 25.8.30 When handed in at Local Office 26 Aug 1930 Port of **HULL**

No. in Reg. Book 61608 on the **Steam Trawler "LADY ELSA"** Date, First Survey 26 May Last Survey 20 Aug 1930

(Number of Visits 127) Gross Tons 373.42 Net Tons 158.21

Master _____ Built at **Beverley** By whom built **Lock, Nelson & Gemmell Ltd** No. 551 When built 1930
Engines made at **Hull** By whom made **Charles D. Holmes & Co Ltd** Engine No. 1405 When made 1930
Boilers made at **Hull** By whom made **— do —** Boiler No. 1405 When made 1930
Nominal Horse Power **. 96** Owners **Juuland Amalgamated Trawlers**, belonging to **Hull**

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **Witkowitz Bergau & Eisenhutte G/S.** (Letter for Record **S.**)

Total Heating Surface of Boilers **1698 sq ft** Is forced draught fitted **no** Coal or Oil fired **coal**

No. and Description of Boilers **One single ended return tube** Working Pressure **200 # #"**

Tested by hydraulic pressure to **350 #** Date of test **4/7/30** No. of Certificate **3786** Can each boiler be worked separately _____

Area of Firegrate in each Boiler **49.2 sq ft** No. and Description of safety valves to each boiler **2 Spring loaded.**

Area of each set of valves per boiler { per Rule **9.8"** as fitted **9.8"** Pressure to which they are adjusted **200 #** 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"** Is oil fuel carried in the double bottom under boilers _____

Smallest distance between shell of boiler and tank top plating _____ Is the bottom of the boiler insulated _____

Largest internal dia. of boilers **14' 0"** Length **10' 8"** Shell plates: Material **Steel** Tensile strength **28/32**

Thickness **1 9/32"** Are the shell plates welded or flanged _____ Description of riveting: circ. seams { end **DR.** inter. _____

long. seams **J.R. DR.S.** Diameter of rivet holes in { circ. seams _____ long. seams **1 9/32"** Pitch of rivets { **3 3/4"** **8 9/16"**

Percentage of strength of circ. end seams { plate **65.8** rivets **51.2** Percentage of strength of circ. intermediate seam { plate _____ rivets _____

Percentage of strength of longitudinal joint { plate **85.03** rivets **90.8** combined **88.8** Working pressure of shell by Rules **201 # #"**

Thickness of butt straps { outer **1"** inner **1 1/8"** No. and Description of Furnaces in each Boiler **Three plain.**

Material **Steel** Tensile strength **26/30 tons** Smallest outside diameter **41"**

Length of plain part { top **46"** bottom **69"** Thickness of plates { crown **13/16"** bottom _____ Description of longitudinal joint **Welded.**

Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules **219 # #"**

End plates in steam space: Material **Steel** Tensile strength **26/30 tons** Thickness **1 3/16"** Pitch of stays **18"**

How are stays secured **Double nuts & washers.** Working pressure by Rules **220 # #"**

Tube plates: Material { front **Steel** back _____ Tensile strength { **26/30 tons** Thickness { **15/16"** **1/8"**

Mean pitch of stay tubes in nests **10.97"** Pitch across wide water spaces **13 3/4"** Working pressure { front **211 # #"** back **230 # #"**

Girders to combustion chamber tops: Material **Steel** Tensile strength **28/32 tons** Depth and thickness of girder at centre **10 1/2" x 9 1/2" x 1 3/4"** Length as per Rule **36 3/16"** Distance apart **9"** No. and pitch of stays in each **3 @ 8 3/4"** Working pressure by Rules **210 # #"** Combustion chamber plates: Material **Steel**

Tensile strength **26/30 tons** Thickness: Sides **3/4"** Back **2 1/32"** Top **1/4" & 2 3/32"** Bottom **3/4"**

Pitch of stays to ditto: Sides **9" x 8 3/4"** Back **9" x 8 1/2"** Top **9" x 8 3/4"** Are stays fitted with nuts or riveted over **nuts**

Working pressure by Rules **230 #** Front plate at bottom: Material **Steel** Tensile strength **26/30 tons** Thickness **15/16"** Lower back plate: Material **Steel** Tensile strength **26/30 tons** Thickness **29/32"**

Pitch of stays at wide water space **14" x 8 3/4"** Are stays fitted with nuts or riveted over **nuts**

Working Pressure **228 # #"** Main stays: Material **Steel** Tensile strength **28/32 tons**

Diameter { At body of stay, or Over threads **3 1/4"** No. of threads per inch **8** Area supported by each stay **324 #"**

Working pressure by Rules **248 # #"** Screw stays: Material **Steel** Tensile strength **26/30 tons**

Diameter { At turned off part, or Over threads **1 1/8" & 1 3/4"** No. of threads per inch **10** Area supported by each stay **189 #"**

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Working pressure by Rules 230 # Are the stays drilled at the outer ends No Margin stays: Diameter ^{At turned off part,} 1 7/8"
 No. of threads per inch 10 Area supported by each stay 97.75 sq" Working pressure by Rules 218 # sq"
 Tubes: Material Iron External diameter ^{Plain} 3 1/2" Thickness ^{Stay} 5/16" No. of threads per inch 9
 Pitch of tubes 4 7/8" Working pressure by Rules 215 # sq" Manhole compensation: Size of opening in
 shell plate 16" x 12" Section of compensating ring 34 x 24 x 1 9/32" No. of rivets and diameter of rivet holes 32 @ 1 1/4"
 Outer row rivet pitch at ends 8 9/16" Depth of flange if manhole flanged Steam Dome: Material _____
 Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
 Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint ^{Plate} _____
 Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of
 stays _____ Inner radius of crown _____ Working pressure by Rules _____
 How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell _____

Type of Superheater _____ Manufacturers of ^{Tubes} _____
 Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____
 Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off and
 the boiler be worked separately _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____
 Area of each safety valve _____ Are the safety valves fitted with easing gear _____ Working pressure as per
 Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure:
 tubes _____, castings _____ and after assembly in place _____ Are drain cocks or valves fitted
 to free the superheater from water where necessary _____
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

The foregoing is a correct description,
 For **CHARLES D. HOLMES & Co., LTD** Manufacturer.

Dates of Survey while building ^{During progress of work in shops - -} See attached report Are the approved plans of boiler and superheater forwarded herewith
^{During erection on board vessel - -} on Machinery (If not state date of approval.)
 Total No. of visits 1

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built
under special survey and in accordance with the approved plan
and the materials and workmanship are sound & good.
It has been satisfactorily fitted on board, tried under steam
and its safety valves adjusted under steam as above.

Charged on engine report sent herewith.
 Survey Fee ... £ : ✓ : When applied for, ✓ 192
 Travelling Expenses (if any) £ : ✓ : When received, ✓ 192

B. Knuffatt
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 29 AUG 1930

Assigned See F.E. Rpt.

