

# REPORT ON BOILERS.

No. 12983

Port of WEST HARTLEPOOL.

WED. 18 JUL 1906

No. in Survey held at West Hartlepool

Date, first Survey 3rd April

Received at London Office 9th June 1906

Reg. Book.

on the Steam Trawler "Hector" "Hectoria"

(Number of Visits 29)

Tons } Gross  
Net

Master \_\_\_\_\_ Built at Selly By whom built Cochran & Sons

When built 1906

Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_

Boilers made at West Hartlepool By whom made Central Marine & Works when made 1906

Registered Horse Power 76

Owners \_\_\_\_\_

Port belonging to \_\_\_\_\_

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel John C. Green & Sons

(Letter for record S) Total Heating Surface of Boilers 13144 sq ft Is forced draft fitted \_\_\_\_\_ No. and Description of Boilers One Cylindrical Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 9/6/06

No. of Certificate 3060 Can each boiler be worked separately  Area of fire grate in each boiler 34.7 sq ft No. and Description of safety valves to each boiler 2 Spring loaded. Area of each valve 3.98 sq in Pressure to which they are adjusted 185 lb

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 alt 8" Mean dia. of boilers 12.6 Length 10.0

Material of shell plates Steel Thickness 1 1/2" Range of tensile strength 27-30 Are the shell plates welded or flanged both

Descrip. of riveting: cir. seams  long. seams all lap Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 7/8"

Lap of plates or width of butt straps 16 5/8" Per centages of strength of longitudinal joint rivets 86 7/8 Working pressure of shell by rules 186 lb Size of manhole in shell 16 x 12 Size of compensating ring 32 x 28 x 1 1/2" No. and Description of Furnaces in each boiler Two Steam Material Steel Outside diameter 43" Length of plain part 70" Thickness of plates 1 1/2"

Description of longitudinal joint welded No. of strengthening rings  Working pressure of furnace by the rules 180 lb Combustion chamber plates: Material Steel Thickness: Sides 2 1/2" Back 2 1/2" Top 2 1/2" Bottom 1 3/4" Pitch of stays to ditto: Sides 9 1/2" Back 9 1/2"

Top 9 1/2" If stays are fitted with nuts or riveted heads none Working pressure by rules 180 lb Material of stays Steel Diameter at smallest part 1 5/8" Area supported by each stay 9 1/2" Working pressure by rules 239 lb End plates in steam space: Material Steel Thickness 1 1/8"

Pitch of stays 17 1/2" How are stays secured all nut Working pressure by rules 182 lb Material of stays Steel Diameter at smallest part 2 29/32"

Area supported by each stay 17 1/2" Working pressure by rules 214 lb Material of Front plates at bottom Steel Thickness 1" Material of Lower back plate Steel Thickness 1 5/8" Greatest pitch of stays 14" Working pressure of plate by rules 180 lb Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 1" Back 1 3/16" Mean pitch of stays 9" Pitch across wide water spaces 14 1/4" Working pressures by rules 189 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 x 1 1/2" Length as per rule 31 5/8" Distance apart 8 1/4" Number and pitch of Stays in each two 9 1/2"

Working pressure by rules 207 lb Superheater or Steam chest: how connected to boiler \_\_\_\_\_ 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 \_\_\_\_\_

## VERTICAL DONKEY BOILER— No. \_\_\_\_\_ Description \_\_\_\_\_ Manufacturers of steel \_\_\_\_\_

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_

Descrip. of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_

Radius of do. \_\_\_\_\_ No. of Stays to do. \_\_\_\_\_ Dia. of stays \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_

Thickness of furnace plates \_\_\_\_\_ Description of joint \_\_\_\_\_ Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_

Stays \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

The foregoing is a correct description,  
Wm. Borrassman Manufacturer.

Dates of Survey while building { During progress of work in shops - - - } 1906. Apr. 7. 6. 19. 24. 25. 27. May 2. 4. 7. 8. 11. 14. 15. 16. 17. 18. 21. 22. 23. 24. 25. 29. 30. 31. June 2. 1. 7. 8. 9.  
{ During erection on board vessel - - - }  
Total No. of visits 29

Is the approved plan of main boiler forwarded herewith Yes  
" " " donkey " "  
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GENERAL REMARKS (State quality of workmanship, opinions as to class, &c. *Workmanship Good.*)

*This case is similar in all respects to Central No R 135.  
R 136 + R 137 West Hamlepool Repairs Nos 12895, 12897 + 12898 respectively*

*This main Boiler has been constructed under Special  
Survey in accordance with the approved Photo Print tested by  
hydraulic pressure and found tight and sound.*

*It has now been forwarded to Grimsby where it will be  
placed on board the Steam Trawler "Haleia" building by  
Messrs. Cochrane & Sons of Selby.*

*The boiler securely fastened on board the vessel at Grimsby and  
the safety valves adjusted* *R. Ritchie*

Certificate (if required) to be sent to  
(The Stewards are requested to write on or below the space for Committee's Minute.)

The amount of Entry Fee...	£	:	:	When applied for,
Special ... ..	£	3	11	14. 6. 06
Donkey Boiler Fee ...	£	:	:	When received,
Travelling Expenses (if any) £	£	:	:	11/7/06

*E. W. James Jones*  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. 20 JUL 1906

Assigned

