

# REPORT ON MACHINERY.

Appl. No. 12510

Port of WEST HARTLEPOOL

No. in Survey held at West Hartlepool  
Reg. Book.

Received at London Office MUN. 10 APR 1905

Date, first Survey 17th October 1904 Last Survey 7th Decr 1904  
(Number of Visits 33)

on the Boole & Co's No 74 Steam Trawler "Ginnia"

Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ Tons } Gross  
Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ Net  
When built \_\_\_\_\_

Boilers made at West Hartlepool By whom made Central Marine Engine Works when made \_\_\_\_\_

Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ when made 1904

Nom. Horse Power as per Section 28 66 Is Refrigerating Machinery fitted \_\_\_\_\_ Port belonging to Grimby  
Is Electric Light fitted \_\_\_\_\_

## ENGINES, &c.—Description of Engines

Dia. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Revs. per minute \_\_\_\_\_ No. of Cylinders \_\_\_\_\_ No. of Cranks \_\_\_\_\_

Is the screw shaft fitted with a continuous liner the whole length of the stern tube \_\_\_\_\_ Dia. of Screw shaft as per rule \_\_\_\_\_ Material of screw shaft as fitted \_\_\_\_\_

in the propeller boss \_\_\_\_\_ If the liner is in more than one length are the joints burned \_\_\_\_\_ Is the after end of the liner made water tight \_\_\_\_\_

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive \_\_\_\_\_ If the liner does not fit tightly at the part \_\_\_\_\_

liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ Length of stern bush \_\_\_\_\_

Dia. of Tunnel shaft as per rule \_\_\_\_\_ Dia. of Crank shaft journals as per rule \_\_\_\_\_ Dia. of Crank pin \_\_\_\_\_ Size of Crank webs \_\_\_\_\_ Dia. of thrust shaft under collars \_\_\_\_\_

Dia. of screw \_\_\_\_\_ Pitch of screw \_\_\_\_\_ No. of blades \_\_\_\_\_ State whether moveable \_\_\_\_\_ Total surface \_\_\_\_\_

No. of Feed pumps \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

No. of Bilge pumps \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

No. of Donkey Engines \_\_\_\_\_ Sizes of Pumps \_\_\_\_\_ No. and size of Suctions connected to both Bilge and Donkey pumps \_\_\_\_\_

In Engine Room \_\_\_\_\_ In Holds, &c. \_\_\_\_\_

No. of bilge injections \_\_\_\_\_ sizes \_\_\_\_\_ Connected to condenser, or to circulating pump \_\_\_\_\_ Is a separate donkey suction fitted in Engine room & size \_\_\_\_\_

Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine room always accessible \_\_\_\_\_ Are the sluices on Engine room bulkheads always accessible \_\_\_\_\_

Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the discharge pipes above or below the deep water line \_\_\_\_\_

Are they each fitted with a discharge valve always accessible on the plating of the vessel \_\_\_\_\_ Are the blow off cocks fitted with a spigot and brass covering plate \_\_\_\_\_

What pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges \_\_\_\_\_

When were stern tube, propeller, screw shaft, and all connections examined in dry dock \_\_\_\_\_ Is the screw shaft tunnel watertight \_\_\_\_\_

Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.—

(Letter for record S) Total Heating Surface of Boilers 1142 sq ft Is forced draft fitted no

No. and Description of Boilers One Cylindrical Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 6/12/04 Can each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler 27 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 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9 1/2 Mean dia. of boilers 12' 0" Length 9' 9" Material of shell plates Steel

Thickness 1/32 Range of tensile strength 27-30 Are they welded or flanged both Descrip. of riveting: cir. seams \_\_\_\_\_ long. seams all chain

Diameter of rivet holes in long. seams 1/16 Pitch of rivets 7/16 Lap of plates or width of butt straps 15 1/4

Per centages of strength of longitudinal joint \_\_\_\_\_ Working pressure of shell by rules 180 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 32" x 28" x 1/8" No. and Description of Furnaces in each boiler two bottom Material Steel Outside diameter 37 1/2"

Length of plain part top \_\_\_\_\_ bottom 15" Thickness of plates crown \_\_\_\_\_ bottom 19/32" Description of longitudinal joint welded No. of strengthening rings four

Working pressure of furnace by the rules 189 lbs Combustion chamber plates: Material Steel Thickness: Sides 10/16" Back 2 1/32" Top 10/16" Bottom 13/16"

Pitch of stays to ditto: Sides 9" Back 8 1/4" Top 9" If stays are fitted with nuts or riveted heads both Working pressure by rules 181 lbs

Material of stays Steel Diameter at smallest part 1 7/8" Area supported by each stay 9.2 sq in Working pressure by rules 252 lbs End plates in steam space: Material Steel Thickness 1/16" Pitch of stays 18" x 15 1/4" How are stays secured all nut Working pressure by rules 182 lbs Material of stays Steel

Diameter at smallest part 2 2/32" Area supported by each stay 18" x 15 1/4" Working pressure by rules 203 lbs Material of Front plates at bottom Steel

Thickness 1/32 Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 16" Working pressure of plate by rules 180 lbs

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 1 1/32" Back 2 1/32" Mean pitch of stays 9"

Pitch across wide water spaces 15" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9" x 1 1/4" Length as per rule 30" Distance apart 9" Number and pitch of Stays in each two 8 1/4"

Working pressure by rules 189 lbs 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 \_\_\_\_\_



**DONKEY BOILER—** No. \_\_\_\_\_ Description \_\_\_\_\_

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 \_\_\_\_\_ 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 \_\_\_\_\_

Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:—

The foregoing is a correct description,  
*J. C. Borrowman* Manufacturer.

Dates of Survey while building

|                                      |  |
|--------------------------------------|--|
| During progress of work in shops - - | 1904. Oct. 17, 18, 20, 21, 24, 26, 27, 28, 31, Nov. 1, 2, 3, 4, 8, 9, 10, 11, 14, 15, 17, 18, 21, 22, 23, 24, 25, 28, 29, Dec. 1, 2, 5, 6, 7 |
|                                      | During erection on board vessel - -  |
|                                      | March 14 <sup>th</sup> , 16, 20, 24, 27, 1905.   |
| Total No. of visits                  | 33. <i>Sal-Gus.</i>  |

Is the approved plan of main boiler forwarded herewith *Yes*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *Workmanship good.*)

*This Main Boiler has been constructed under Special Survey in accordance with the approved Plans and has been satisfactorily tested by hydraulic pressure. It has now been forwarded to Grimsby where it will be placed onboard the Steam Trawler "Binnica" built by Messrs. Goble & Co.*

Certificate (if required) to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

|                                |   |   |   |                   |
|--------------------------------|---|---|---|-------------------|
| The amount of Entry Fee..      | £ | : | : | When applied for, |
| Special .. .. .                | £ | 7 | 6 | 9. 12. 1904       |
| Donkey Boiler Fee .. .. .      | £ | : | : | When received,    |
| Travelling Expenses (if any) £ | : | : | : | Jan 1905          |

*James James*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 11 APR 1905

Assigned



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