

# REPORT ON MACHINERY.

Port of *Aberdeen*

Received at London Office

WED. 5 APR 1893

No. in Survey held at *Aberdeen* Date, first Survey *Nov. 4, 1892* Last Survey *April 4, 1893*  
Reg. Book.

on the *Screw Steam Trawler "Hermes"* (Number of Visits *24*)

Tons { Gross *166.98*  
Net *40.08*  
When built *1893*

Master *C. Nielsen* Built at *Aberdeen* By whom built *Messrs A Hall & Co*

Engines made at *Aberdeen* By whom made *Messrs A Hall & Co* when made *1893*

Boilers made at *Aberdeen* By whom made *Messrs A Hall & Co* when made *1893*

Registered Horse Power *60* Owners *Anglo-Norwegian Steam Fishing Co Ltd* Port belonging to *Hull*

Nom. Horse Power as per Section 28 *63*

ENGINES, &c.— Description of Engines *Triple Expansive direct acting* No. of Cylinders *Three*

Diameter of Cylinders *12, 19, 32 1/2* Length of Stroke *24* Revolutions per minute \_\_\_\_\_ Diameter of Screw shaft *as per rule 5.9*  
*as fitted 6.7*

Diameter of Tunnel shaft *as per rule 5.6* Diameter of Crank shaft journals *6 1/2* Diameter of Crank pin *6 1/2* Size of Crank webs *4 3/8 x 8*  
*as fitted 6*

Diameter of screw *8 3/8* Pitch of screw *10 ft* No. of blades *4* State whether moveable *no* Total surface *26 sq ft*

No. of Feed pumps *One* Diameter of ditto *2 1/2* Stroke *14* Can one be overhauled while the other is at work

No. of Bilge pumps *One* Diameter of ditto *2 1/2* Stroke *14* Can one be overhauled while the other is at work

No. of Donkey Engines *One* Sizes of Pumps *2 3/4 cyl 1 1/2 str 1 1/2* No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room *Three 2" & 2 1/2 dia* In Holds, &c. *One 2"*

No. of bilge injections *One* sizes *2 1/2 dia* Connected to condenser, or to circulating pump *circ p.* Is a separate donkey suction fitted in Engine room & size *Yes 2 1/2 dia*

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

Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *both*

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

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

What pipes are carried through the bunkers *forward suction through cross bunker* How are they protected *Strong wood casing*

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

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *before launching* Is the screw shaft tunnel watertight *no tunnel*

Is it fitted with a watertight door  worked from

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *1150 sq ft*

No. and Description of Boilers *1 Cylindrical multitubular* Working Pressure *160 lb* Tested by hydraulic pressure to *320 lb*

Date of test *Mar 22/93* Can each boiler be worked separately  Area of fire grate in each boiler *40.25 sq ft* No. and Description of safety valves to each boiler *Two direct Spring* Area of each valve *5 sq"* Pressure to which they are adjusted *160 lb* Are they fitted with easing gear *Yes* Smallest distance between boilers or uptakes and bunkers or woodwork *6 1/2* Mean diameter of boilers *11.6*

Length *10 ft* Material of shell plates *Steel* Thickness *1"* Description of riveting: circum. seams *D riv lap* long. seams *D riv butt*

Diameter of rivet holes in long. seams *1 3/16* Pitch of rivets *6"* Lap of plates or width of butt straps *12 1/2"*

Per centages of strength of longitudinal joint rivets *82.5* Working pressure of shell by rules *162 lb* Size of manhole in shell *12 1/2 x 16 1/2*  
plate *80.2*

Size of compensating ring *D riv 1" thick* No. and Description of Furnaces in each boiler *Two ribbed* Material *Steel* Outside diameter *4 1/2*

Length of plain part top *6.6* bottom *8.9* Thickness of plates crown *1/2* bottom *1/2* Description of longitudinal joint  No. of strengthening rings *One 3 x 3 1/2*

Working pressure of furnace by the rules *165 lb* Combustion chamber plates: Material *Steel* Thickness: Sides *19/32* Back *19/32* Top *19/32* Bottom *5/8*

Pitch of stays to ditto: Sides *8 x 8 1/2* Back *8 x 8 1/2* Top *radial* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *168 lb*

Material of stays *Steel* Diameter at smallest part *1 1/2 x 1 3/4* Area supported by each stay *68 sq"* Working pressure by rules *146 lb* End plates in steam space: Material *Steel* Thickness *5/8* Pitch of stays *1 1/2 x 1 1/2* How are stays secured *dbl nuts & washers* Working pressure by rules *142 lb* Material of stays *Steel*

Diameter at smallest part *2 1/2* Area supported by each stay *210.25 sq"* Working pressure by rules *160 lb* Material of Front plates at bottom *Steel* Thickness *11/16* Material of Lower back plate *Steel* Thickness *11/16* Greatest pitch of stays *1 3/2 plating* Working pressure of plate by rules *166 lb*

Diameter of tubes *3 1/2* Pitch of tubes *4 3/4 x 4 3/4* Material of tube plates *Steel* Thickness: Front *21/32* Back *21/32* Mean pitch of stays *9 1/2 x 9 1/2*

Pitch across wide water spaces *15 1/2* Working pressures by rules *160 lb* Girders to Chamber tops. Material  Depth and thickness of girder at centre  Length as per rule  Distance apart  Number and pitch of Stays in each

Working pressure by rules  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



Is a Report on the Machinery of the Ship? Yes

4529 am

DONKEY BOILER— Description *None*

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 \_\_\_\_\_  
 Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 Description of riveting long. seams \_\_\_\_\_ Diameter 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:— *Two top end bolts and nuts, two bottom end ditto two main bearing bolts, one set of coupling bolts, one set of feed and bilge pump valves, assorted bolts and nuts and iron of various sizes*

The foregoing is a correct description,

Manufacturer.

*M. J. M. Ho*

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

*The Engines and Boilers of this vessel have been constructed under Special Survey, in accordance with the Rules, and the approved tracing. They are of good material and workmanship, and eligible in my opinion, to receive the notification of L M 63.93 in the Register Book.*

*Large blue scribbles and a signature across the lower half of the page.*

It is submitted that this vessel is eligible for THE RECORD + L M 63.93 -  
 Recd 5/4/93.

MACHINERY CERTIFICATE WRITER.

Certificate (if required) to be sent to *Aberdeen*

The amount of Entry Fee..	£ 1 :	:	When applied for,
Special .. .. .	£ 9 : 9 :	:	April 1893
Donkey Boiler Fee .. .. .	£ ✓ :	:	When received,
Travelling Expenses (if any) £	✓ :	:	5/4/93

*J. G. Lisle Hindmarsh*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI 7 APL 1893

Assigned

*+ L M 63.93*



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(The Surveys are requested not to write on or below the space for Committee's Minute.)