

# REPORT ON MACHINERY.

BOX CASE.

Ma No. 16907  
Inbr No. 965

Port of *Sunderland*

THURS. 1 JUN 1893

Received at London Office

No. in Survey held at *Sunderland*

Date, first Survey *October 25/92* Last Survey *Sld. March 1893*

eg. Book. *20<sup>th</sup> March '93*

(Number of Visits *15*)

on the *G.S. "Falken"*

Tons *854*

ister Built at *Middlesbrough*

By whom built *Craig Taylor & Co*

When built *1893*

gines made at *S. land*

By whom made *N.E. M. Eng. Co. Ltd.*

when made *1893*

ilers made at *S. land*

By whom made *N.E. M. Eng. Co. Ltd.*

when made *1893*

gistered Horse Power *140*

Owners *Kednaktubolapt Condor*

Port belonging to *Stockholm*

n. Horse Power as per Section 28

*Register No. 135*

GINES, &c.— Description of Engines *Tri compound*

No. of Cylinders *3*

Diameter of Cylinders *18 1/2" 30" 49"* Length of Stroke *33"* Revolutions per minute *40* Diameter of Screw shaft *8 1/4"*

Diameter of Tunnel shaft *8 1/4"* Diameter of Crank shaft journals *9 1/4"* Diameter of Crank pin *9 1/4"* Size of Crank webs *6 1/4" x 1 1/4"*

Diameter of screw *13 feet* Pitch of screw *1 1/4 feet* No. of blades *4* State whether moveable *f* Total surface *4 1/4 f.*

of Feed pumps *2* Diameter of ditto *3"* Stroke *20"* Can one be overhauled while the other is at work *yes*

of Bilge pumps *2* Diameter of ditto *3"* Stroke *20"* Can one be overhauled while the other is at work *yes*

of Donkey Engines *2* Sizes of Pumps *6 x 9" 4 1/2 x 3 1/2 x 5 1/4 x 5"* No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *3" fore hold port 3" starb. three 3" tank three 2" fore tank* In Holds, &c. *3" Tunnel well 3" after hold Port 3" starb.*

*3" fore hold port 3" starb. three 3" aft. tank. three 3" fore tank. 1-3" fore peak tank.*

of bilge injections *1* sizes *4"* Connected to condenser, or to circulating pump *C.P.* Is a separate donkey suction fitted in Engine room & size *yes*

Are 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 *yes*

Are 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*

Are the pipes carried through the bunkers *none* How are they protected

Are the 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*

Are the stern tube, propeller, screw shaft, and all connections examined in dry dock *new vessel* Is the screw shaft tunnel watertight *yes*

Is the tunnel door *yes* worked from *Top platform*

Sc.— (Letter for record *S.*) Total Heating Surface of Boilers *2000 f.*

No. of Boilers *2* Cyl. multi. single ended Working Pressure *160 lbs.* Tested by hydraulic pressure to *320 lbs.*

Can each boiler be worked separately *yes* Area of fire grate in each boiler *34 f.* No. and Description of safety valves to

*spring* Area of each valve *7.042* Pressure to which they are adjusted *165 lbs.* Are they fitted

Material of shell plates *S.* Thickness *59/64* Description of riveting: circum. seams *d.r. lap.* long. seams *t.r. butt.*

pitch of rivets *6 1/2"* Lap of plates or width of butt straps *1 1/4"*

of strength of longitudinal joint *90* Working pressure of shell by rules *160 lbs.* Size of manhole in shell *16" x 12"*

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**DONKEY BOILER**— Description *Vertical with 4 cross water tubes*  
 Made at *Stockton* By whom made *J. Luard & Co. Ltd.* When made *20/10/92* Where fixed *Stoke hole.*  
 Working pressure *80 lbs* Tested by hydraulic pressure to *160 lbs* No. of Certificate *537* Fire grate area *28* Description of safety valves *Spring.*  
 No. of safety valves *one* Area of each *15.9* Pressure to which they are adjusted *85 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*  
 Diameter of donkey boiler *4'0"* Length *14'0"* Material of shell plates *Steel* Thickness *15/32"*  
 Description of riveting long seams *Lap Double rivet* Diameter of rivet holes *13/16"* Whether punched or drilled *punched* Pitch of rivets *2 1/2"*  
 Lap of plating *4 1/4"* Per centage of strength of joint Rivets *68.8* Thickness of shell crown plates *9/16"* Radius of do. *5'9"* No. of Stays to do. *4*  
 Dia. of stays *1 1/4"* Diameter of furnace Top *5'4"* Bottom *6'4 1/2"* Length of furnace *5'9"* Thickness of furnace plates *2 1/2"*  
 joint *Lap Single* Thickness of furnace crown plates *5/8"* Stayed by *Same as shell crown.* Working pressure of furnace by rules *80 lbs* Diameter of uptake *15"* Thickness of uptake plates *1/16"* Thickness

**SPARE GEAR.** State the articles supplied:— *Propeller, 2 main Bearing Bolts and Bolts, 2 crank pin Bolts, 1 set coupling Bolts, 1 set pin Bolts, 1 set escape, & safety valve sprump, 1 set feed & Bilge pump valves, main feed & donkey check valves, Bolts, nuts & Iron gratings &c.*

The foregoing is a correct description,  
*North Eastern Marine Engineering Co. Ltd.* Manufacturer. *main engines & boilers*  
*J. H. Durin.* Director

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The machinery and boiler of this vessel have been constructed under special survey of materials and workmanship. The main steam pipe was tested to twice the working pressure. When fitted on board and tried under steam the machinery worked satisfactorily. In my opinion this vessel will be eligible for the notation of R. M. C. H/93. When the following work has been completed viz. Donkey boiler stayed in place. mounted & its safety valve adjusted under steam. tunnel made watertight &c. pumping arrangement completed as per approved plan &c. are given to examine.*

*The above mentioned work has been satisfactorily completed.*

*Wm. R. Austin*  
*Middlebrough Docks.*

*It is submitted that this vessel is eligible for THE RECORD + LMC 57*  
*Sub 1/6/93*

Certificate (if required) to be sent to

The amount of Entry Fee. £ *2 : 5 : 0* When applied for,  
 Special . . . . . £ *20 : 5 : 0* . . . . . 18  
 Donkey Boiler Fee . . . . . £ . . . . . When received.  
 Travelling Expenses (if any) £ . . . . . 18  
*11/5/93*

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

Committee's Minute

FT 2 JUN 1893

Assigned

*+ 2 LMC 57 93*



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