

# REPORT ON MACHINERY.

Port of Newcastle.

Received at London Office TUES. 22 MAY 1906

No. in Survey held at Newcastle.

Date, first Survey Aug 29

Last Survey 15<sup>th</sup> May 1906

Reg. Book:

on the

S/S 'Salatis'

(Number of Visits 33)

Master

Built at Newcastle. By whom built Armstrong Whitworth

Tons { Gross 4775  
Net 3059  
When built 1906

Engines made at Newcastle.

By whom made Wallsend Slipway & Eng 6<sup>th</sup>

when made 1906.

Boilers made at "

By whom made "

when made 1906

Registered Horse Power

Owners 'Kamos'

Port belonging to Hamburg.

Nom. Horse Power as per Section 28 471.

Is Refrigerating Machinery fitted for cargo purposes no.

Is Electric Light fitted yes.

## ENGINES, &c.—Description of Engines Triple.

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 24. 45. 45

Length of Stroke 48

Revs. per minute 64.

Dia. of Screw shaft

as per rule 14.9

Material of screw shaft

19. Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes.

Is the after end of the liner made water tight

in the propeller boss yes. If the liner is in more than one length are the joints burned ✓

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes.

If two

liners are fitted, is the shaft lapped or protected between the liners ✓

Length of stern bush 5'5"

Dia. of Tunnel shaft

as per rule 13.38

as fitted 13.4

Dia. of Crank shaft journals

as per rule 14.04

as fitted 14.2

Dia. of Crank pin 14.2

Size of Crank webs 23x9.2

Dia. of thrust shaft under

collars 1 4.2

Dia. of screw 18

Pitch of Screw 1 8.1

No. of Blades 4.

State whether moveable M.

Total surface 1104

No. of Feed pumps Weirs

Diameter of ditto 9.2 x 7"

Stroke 21"

Can one be overhauled while the other is at work yes

No. of Bilge pumps 2

Diameter of ditto 4.4

Stroke 24"

Can one be overhauled while the other is at work yes

No. of Donkey Engines 3

Sizes of Pumps 10 x 7 x 12 - 5 x 6 x 5 - 4 x 3 x 6

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 of 3.2

In Holds, &c. 2 of 3.2 in each hold.

No. of Bilge Injections 1 sizes 8"

Connected to condenser, or to circulating pump C.P.

Is a separate Donkey Suction fitted in Engine room & size yes.

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 about

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 none.

How are they protected ✓

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

Dates of examination of completion of fitting of Sea Connections 23/3/06.

of Stern Tube 23/3.

Screw shaft and Propeller 23.3.

Is the Screw Shaft Tunnel watertight yes

Is it fitted with a watertight door yes

worked from top platform

## BOILERS, &c.—(Letter for record S)

Manufacturers of Steel Hoerder, Bergwerth's, Actien Gesellschaft.

Total Heating Surface of Boilers 63604

Is Forced Draft fitted yes

No. and Description of Boilers 3 Stead. Mull. br.

Working Pressure 180 lbs

Tested by hydraulic pressure to 360.

Date of test 18.12.05

No. of Certificate 7/25

Can each boiler be worked separately yes.

Area of fire grate in each boiler 54 sq. ft.

No. and Description of Safety Valves to

each boiler 2 Springs

Area of each valve 11.78

Pressure to which they are adjusted 180 lbs

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2 feet.

Mean dia. of boilers 14.03

Length 11'6"

Material of shell plates S

Thickness 1 3/16

Range of tensile strength 28-32.

Are the shell plates welded or flanged suds

Descrip. of riveting: cir. seams 2. Lap

long. seams 2. Butts.

Diameter of rivet holes in long. seams 1 3/2.

Pitch of rivets 9.4"

Lap of plates or width of butt straps 19.4"

Per centages of strength of longitudinal joint

rivets 89.2

plate 85.47

Working pressure of shell by rules 204 lbs

Size of manhole in shell 16 x 12.

Size of compensating ring Wheib

No. and Description of Furnaces in each boiler 3 Momoons

Material S

Outside diameter 3 8.2

Length of plain part

top 34

bottom 64

Thickness of plates

Description of longitudinal joint weld.

No. of strengthening rings ✓

Working pressure of furnace by the rules 205

Combustion chamber plates: Material S

Thickness: Sides 21/32

Back 5/8"

Top 21/32

Bottom 29/32

Pitch of stays to ditto: Sides 7.2 x 8.8

Back 7.2 x 8.8

Top 7.2 x 7.8

If stays are fitted with nuts or riveted heads nut.

Working pressure by rules 236

Material of stays S

Diameter at smallest part 2.03

Area supported by each stay 612

Working pressure by rules 242

End plates in steam space:

Material S.

Thickness 1 1/8

Pitch of stays 16.2 x 14.2

How are stays secured d nuts

Working pressure by rules 243

Material of stays S

Diameter at smallest part 5.05

Area supported by each stay 231.5

Working pressure by rules 218

Material of Front plates at bottom S

Thickness 1

Material of Lower back plate S

Thickness 1 5/16

Greatest pitch of stays 14.4"

Working pressure of plate by rules 284

Diameter of tubes 2.2

Pitch of tubes 3.2 x 3.2

Material of tube plates S

Thickness: Front 1"

Back 3/4

Mean pitch of stays 7.2"

Pitch across wide water spaces 13

Working pressures by rules 212

Girders to Chamber tops: Material S

Depth and

thickness of girder at centre 9' x 12.

Length as per rule 30.2

Distance apart 7.8

Number and pitch of stays in each 2 of 8.4"

Working pressure by rules 207

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—** Manufacturers of Steel *See report attached*

No. \_\_\_\_\_ Description \_\_\_\_\_  
 Made at \_\_\_\_\_ By whom made \_\_\_\_\_  
 Working pressure tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
 Valves \_\_\_\_\_ No. of Safety Valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of Safety \_\_\_\_\_  
 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 \_\_\_\_\_ Plates \_\_\_\_\_  
 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 \_\_\_\_\_ Stayed by \_\_\_\_\_  
 Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— *1 set connecting rod bolts & nuts. 1 set main bearing bolts & nuts. 1 set coupling bolts & nuts. 1 set valves for steam pumps. 1 set bilge pump valves. Propeller shaft bronze blades. Propeller & crank shaft. Nuts bolts and assorted iron*

The foregoing is a correct description,  
**FOR THE WALLBEND SLIPWAY & ENGINEERING CO. LIMITED.**  
*A. King* Manufacturer.

Dates of Survey while building  
 During progress of work in shops— *1905 Aug 29 Sep 4, 6, 7, 14, 19, 22, 28, Oct 2, 4, 12, 25, Nov 1, 6, 8, 14, 21, 29, Dec 1, 12, 18, 19, 28, 1906 Jan 30, Feb 20, 28*  
 During erection on board vessel— *Mar 2, 30, Apr 2, 8, 24, 25, May 15*  
 Total No. of visits *33*

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

Dates of Examination of principal parts—Cylinders *7-1-06* Slides *7-1-06* Covers *7-1-06* Pistons *7-1-06* Rods *8-1-06*  
 Connecting rods *8-1-06* Crank shaft *4/11/05* Thrust shaft *6-11-05* Tunnel shafts *6-11-05* Screw shaft *28/2/06* Propeller *24-4-06*  
 Stern tube *24/4, 06* Steam pipes tested *2/06* Engine and boiler seatings *3/4* Engines holding down bolts *5/4*  
 Completion of pumping arrangements *15/5* Boilers fixed *5/4, 06* Engines tried under steam *15/4, 06*  
 Main boiler safety valves adjusted *15/4, 06* Thickness of adjusting washers *P.B. 1/2, 3/4, 5/8, C.B. 1/2, 3/4, 5/8, S. 1/2, 3/4, 5/8*  
 Material of Crank shaft *S* Identification Mark on Do. *KH 8/05* Material of Thrust shaft *S* Identification Mark on Do. *KH 8/05*  
 Material of Tunnel shafts *S* Identification Marks on Do. *KH 8/05* Material of Screw shafts *S* Identification Marks on Do. *KH 8/05*  
 Material of Steam Pipes *Steel* Test pressure *360 lb*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *Machinery and boilers built under special survey. materials and workmanship good. Engines and boilers examined under full steam & found satisfactory. In my opinion this vessel is now eligible for the record of L.M.C. 5/06. in the Register 12007.*)

It is submitted that this vessel is eligible for THE RECORD **L.M.C. 5.06. F.D. ELEC. LIGHT.**

*Ans.*  
*22.5.06*

The amount of Entry Fee.. £ *3* : : :  
 Special .. £ *48* : *11* : : *17 MAY 1906*  
 Donkey Boiler Fee .. £ : : :  
 Travelling Expenses (if any) £ : : : *2-1 MAY 1906*

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

Committee's Minute

FRI. 25 MAY 1906

Assigned

MACHINERY CERTIFICATE WRITTEN.



Dates of Survey while building