

REPORT ON MACHINERY.

Leith

NO. 8652

Port of Leith

Received at London Office MUN 21 JUN 1897

No. in Survey held at Kinghorn
Reg. Book.

Date, first Survey 10 Decbr 1896 Last Survey 11 June 1897
(Number of Visits 14)

on the S.S. "Jaffa"

Tons { Gross
Net

Master John Scott & Co Built at Kinghorn By whom built John Scott & Co When built 1897

Engines made at Kinghorn By whom made John Scott & Co when made 1897

Boilers made at do By whom made do when made 1897

Registered Horse Power 251 Owners Bailey & Leitham (Limited) Port belonging to Hull

Nom. Horse Power as per Section 28 251

ENGINES, &c.— Description of Engines Triple expansion on three cranks No. of Cylinders 3
Diameter of Cylinders 22" - 36" + 64" Length of Stroke 39" Revolutions per minute 105 Diameter of Screw shaft as per rule 10.83"
Diameter of Tunnel shaft as per rule 10.28" Diameter of Crank shaft journals 11 1/2" Diameter of Crank pin 11 1/4" Size of Crank webs 17 x 7 1/2"
Diameter of screw 13' 0" Pitch of screw 15' 6" No. of blades 4 State whether moveable no Total surface 52 f
No. of Feed pumps 2 Diameter of ditto 3" Stroke 21" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 3" Stroke 21" Can one be overhauled while the other is at work yes
No. of Donkey Engines Two Sizes of Pumps 8 x 5 x 8" + 6 x 6 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room One 3" dia. + two 2 3/4" dia. In Holds, &c. one to fore hold 2 1/2" dia. to main hold one 3" dia. + two 2 1/4" dia. one to after hold 3" dia. one to tunnel well 2 1/2" dia.
No. of bilge injections 1 sizes 6" Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size yes 4"
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 none
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 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
When were stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel 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) Total Heating Surface of Boilers 3975 f
No. and Description of Boilers Two, multitubular single ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs
Date of test 21.5.97 Can each boiler be worked separately yes Area of fire grate in each boiler 67.5 f No. and Description of safety valves to
each boiler Two, spring Area of each valve 7.07 sq" Pressure to which they are adjusted 183 lbs Are they fitted
with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 15" Mean diameter of boilers 15' 0"
Length 11' 0" Material of shell plates Steel Thickness 1 1/2" Description of riveting: circum. seams Lap 1 x 5 Rivd. long. seams S.B.S. 1 Rivd.
Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Lap of plates or width of butt straps 21 3/4"
Per centages of strength of longitudinal joint rivets 87.8 Working pressure of shell by rules 208 lbs Size of manhole in shell 16" x 12"
Size of compensating ring 30 x 30 x 1 1/2" No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 49"
Length of plain part top 1' 0" bottom 1' 0" Thickness of plates crown 5/8" bottom 5/8" Description of longitudinal joint Welded No. of strengthening rings ✓
Working pressure of furnace by the rules 205 lbs Combustion chamber plates: Material Steel Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 7/8"
Pitch of stays to ditto: Sides 8" Back 8 1/2" Top 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 184 lbs
Material of stays Steel Diameter at smallest part 1.46 sq" Area supported by each stay 65 sq" Working pressure by rules 180 lbs End plates in steam space:
Material Steel Thickness 1 1/8" Pitch of stays 15" How are stays secured S. R. & W. Working pressure by rules 266 lbs Material of stays Steel
Diameter at smallest part 5.05 sq" Area supported by each stay 236 sq" Working pressure by rules 192 lbs Material of Front plates at bottom Steel
Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 218 lbs
Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates Steel Thickness: Front 13/16" Back 15/16" Mean pitch of stays 8 7/8"
Pitch across wide water spaces 14" Working pressures by rules 266 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10" x 12" Length as per rule 34 1/2" Distance apart 7 1/2" Number and pitch of Stays in each 3 - 8"
Working pressure by rules 217 lbs Superheater or Steam chest; how connected to boiler none 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— Description *Multitubular single ended.*
 Made at *Kinghorn* By whom made *John Scott & Co* When made *21.5.97* Where fixed *On deck.*
 Working pressure *105 lbs* tested by hydraulic pressure to *210 lbs* No. of Certificate *406* Fire grate area *25.5* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *7.07 sq* Pressure to which they are adjusted *110 lbs* If fitted with easing gear *yes* If steam from main boilers ca
 enter the donkey boiler *no* Diameter of donkey boiler *8' 6"* Length *6' 9"* Material of shell plates *Steel* Thickness *9/16"*
 Description of riveting long. seams *S. B. S. S. Rivet* Diameter of rivet holes *13/16"* Whether punched or drilled *drilled* Pitch of rivets *4 1/2"*
 Width of stays *8"* Per centage of strength of joint Rivets *97.6* Thickness of shell plates *3/4"* Radius of do. *flat* No. of Stays to do. *8*
 Dia. of stays. *2"* Diameter of furnace *Top 31" Bottom* Length of furnace *6' 6"* Thickness of furnace plates *1/2"* Description
 joint *Welded* Thickness of furnace crown plates *✓* Stayed by *✓* Working pressure of shell by rules *110 lbs*
 Working pressure of furnace by rules *111 lbs* Diameter of *tube uptake* *3 1/4"* Thickness of *tube uptake* plates *3/4"* Thickness of water tubes *✓*

SPARE GEAR. State the articles supplied:— *As per Rule 4 in addition, a propeller, air pump
 rod, a pair of connecting rod brasses, an eccentric rod, two slide valve spindle
 & a set of safety valve springs.*

The foregoing is a correct description,

Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this
 vessel have been constructed under special survey & the material
 & workmanship are found & good. The engines have been tried &
 the safety valves of main & donkey boilers adjusted under steam
 at the working pressures. The machinery is now in good &
 safe working condition & eligible in my opinion to have the
 notation of + L.M.C. 6, 97
 The approved boiler tracings are forwarded herewith.*

It is submitted that
 this vessel is eligible for
THE RECORD. + L.M.C. 6, 97.

J.S.
23.6.97.

Certificate (if required) to be sent to

The amount of Entry Fee. . . £ 2 - -
 Special £ 32 : 11 -
 Donkey Boiler Fee £ 2 : 2 :
 Travelling Expenses (if any) £ 3 : 4 -

When applied for,

18. 18. 97

When received,

24.6.97

Wm. Austin.

Thomas Field
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

WED. 23 JUN 1897

Assigned

+ L.M.C. 6, 97



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Lloyd's Register
 Foundation

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