

REPORT ON MACHINERY.

Port of *Dundee*

WED. 5 SEP 1900

in Survey held at *Dundee*
Book.Date, first Survey *25th Oct, 1899* Last Survey *31st Aug 1900*(Number of Visits *57*)on the *Steel Screw Steamer "Kalfond"*Tons { Gross *1219.43*
Net *781.58*by *A. Gittisun*Built at *Dundee*By whom built *Dundee Shipbuilders Co*When built *1900*made at *Dundee*By whom made *Messrs Cooper & Greig*when made *1900*made at *Dundee*By whom made *Messrs Cooper & Greig*when made *1900*

rated Horse Power

Owners *Signal Bergesen*Port belonging to *Narvanger*Horse Power as per Section 28 *133*Is Refrigerating Machinery fitted *no*Is Electric Light fitted *no*INES, &c.—Description of Engines *Triple Expansion, Direct acting* No. of Cylinders *Three* No. of Cranks *3*of Cylinders *17"-28½"-47"* Length of Stroke *30"* Revs. per minute *90* Dia. of Screw shaft *8.84"* as per rule *8.84"* as fitted *9¼"* Length of stern bush *42"*of Tunnel shaft *8.00"* as per rule *8.00"* as fitted *8½"* Dia. of Crank shaft journals *8.42"* as per rule *8.42"* as fitted *8¾"* Dia. of Crank pin *8¾"* Size of Crank webs *16½" x 5½"* Dia. of thrust shaft unders *8¾"* Dia. of screw *12'-6"* Pitch of screw *13'-6"* No. of blades *4* State whether moveable *no* Total surface *52 sq*of Feed pumps *2* Diameter of ditto *3"* Stroke *15"* Can one be overhauled while the other is at work *yes*of Bilge pumps *2* Diameter of ditto *3"* Stroke *15"* Can one be overhauled while the other is at work *yes*of Donkey Engines *Two* Sizes of Pumps *Ballast = 7½" x 8½" x 6" Sphx*
Feed = 5½" x 3½" x 5" Sphx No. and size of Suctions connected to both Bilge and Donkey pumpsEngine Room *Three 2½" diam* In Holds, &c. *Main hold two 2½", aft hold one - 2½" dia*Innuel one = *2½"*of bilge injections *1* sizes *5"* Connected to ~~condenser~~ to circulating pump *yes* Is a separate donkey suction fitted in Engine room & size *yes 2½"*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*all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *both*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*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*pipes are carried through the bunkers *none* How are they protected *yes*all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *yes*the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *yes*were stern tube, propeller, screw shaft, and all connections examined in dry dock *20/8/00* Is the screw shaft tunnel watertight *yes*fitted with a watertight door *yes* worked from *top platform*LERS, &c.—(Letter for record *(S)*) Total Heating Surface of Boilers *2076* Is forced draft fitted *no*and Description of Boilers *One steel cylindrical single ended* Working Pressure *180* Tested by hydraulic pressure to *360*of test *2/7/00* Can each boiler be worked separately *yes* Area of fire grate in each boiler *55 sq* No. and Description of safety valves toboiler *Two Spring* Area of each valve *7.07* Pressure to which they are adjusted *184 lb* Are they fitted with easing gear *yes*least distance between boilers *compartments* and bunkers *woodwork* *18" sides* Mean dia. of boilers *14'-6"* Length *10'-6"* Material of shell plates *steel*thickness *1½"* Range of tensile strength *28-32* Are they welded or flanged *no* Descrip. of riveting: cir. seams *Lap. 8d. 11d. 12d. 13d. 14d. 15d. 16d. 17d. 18d. 19d. 20d. 21d. 22d. 23d. 24d. 25d. 26d. 27d. 28d. 29d. 30d. 31d. 32d. 33d. 34d. 35d. 36d. 37d. 38d. 39d. 40d. 41d. 42d. 43d. 44d. 45d. 46d. 47d. 48d. 49d. 50d. 51d. 52d. 53d. 54d. 55d. 56d. 57d. 58d. 59d. 60d. 61d. 62d. 63d. 64d. 65d. 66d. 67d. 68d. 69d. 70d. 71d. 72d. 73d. 74d. 75d. 76d. 77d. 78d. 79d. 80d. 81d. 82d. 83d. 84d. 85d. 86d. 87d. 88d. 89d. 90d. 91d. 92d. 93d. 94d. 95d. 96d. 97d. 98d. 99d. 100d. 101d. 102d. 103d. 104d. 105d. 106d. 107d. 108d. 109d. 110d. 111d. 112d. 113d. 114d. 115d. 116d. 117d. 118d. 119d. 120d. 121d. 122d. 123d. 124d. 125d. 126d. 127d. 128d. 129d. 130d. 131d. 132d. 133d. 134d. 135d. 136d. 137d. 138d. 139d. 140d. 141d. 142d. 143d. 144d. 145d. 146d. 147d. 148d. 149d. 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DONKEY BOILER—

No. *one* Description *Steel Vertical, 4 Cross tubes*Made at *Dundee*

By whom made

Thos Cooper & Greig

When made

21/7/00

Where fixed

*Stokehold*Working pressure *100* tested by hydraulic pressure to *200*No. of Certificate *791*Fire grate area *25.96*

Description of safety valves

*Spring*No. of safety valves *2*Area of each *5.9*Pressure to which they are adjusted *100*If fitted with easing gear *yes*If steam from main boilers can enter the donkey boiler *no*

Dia. of donkey boiler

*6'-9"*Length *12'-6"*Material of shell plates *steel*Thickness *17/32"*Range of tensile strength *28-32*Descrip. of riveting long. seams *Lap Double Riveted*Dia. of rivet holes *15/16*Whether punched or drilled *Drilled*Pitch of rivets *3"*Lap of plating *4 1/2"*Per centage of strength of joint *79.5*Rivets *68.6*Thickness of shell crown plates *3/4"*Radius of do. *flat*No. of Stays to do. *8 steel*Dia. of stays *2.26*Diameter of furnace Top *62"*Bottom *72"*Length of furnace *68"*Thickness of furnace plates *5/8"*Description of joint *Lap single*Thickness of furnace crown plates *5/8"*Stayed by *as shell crown*Working pressure of shell by rules *107 lb*Working pressure of furnace by rules *100 lb*Diameter of uptake *18"*Thickness of uptake plates *1/2"*Thickness of water tubes *3/8"** *One row 1.51" effective diam steel stays 11" pitch, nuts on both ends.*

SPARE GEAR. State the articles supplied:—

2 bon. rod top end bolts & nuts; 2 bon. rod bottom end bolts & nuts; 2 main bearing bolts & nuts; one set of coupling bolts & nuts; 1 set feed & bilge pump valves, assorted iron bolts & nuts
One cast iron propeller, one tail end shaft, one (1/2") crank shaft; 6 junk ring bolts, 50 condenser tubes
2 cheek valves
 The foregoing is a correct description,

Cooper & Greig

Manufacturer.

1899
 Dates of Survey { During progress of work in shops - *Oct 2.5.27.31; Nov 6.15.20.24.28; Dec 1.6.12.18.27.29; Jan 9.17.24.29*
 while building { During erection on board vessel - *Feb 3.10.14.19.22; March 1.6.12.16.22.27.31; April 12.19.26; May 3.4.8.12.23; June 4.8.20.27.28.29.30.31*
 Total No. of visits *57*

Is the approved plan of main boiler forwarded herewith *yes*" " " donkey " " " *yes*

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

The machinery of this vessel has been built under special survey accordance with the approved plans and Secretary's letters and in general conform with the Rules. The materials and workmanship are sound and good. The Boilers have been tested by hydraulic pressure also examined under steam and found tight and sound.

*The machinery is now in a good and safe working condition and renders the vessel eligible in my opinion to have the notation of *LM-O-800 in the Register Book*

It is submitted that

*this vessel is eligible for the notation of *LM-O-800**W. Morrison**5.9.00**5.9.00*

The amount of Entry Fee..

£ 2 : 5 : 8

When applied for,

Special ..

£ 19 : 19 : 8

Donkey Boiler Fee ..

£ ✓

When received,

Travelling Expenses (if any) £

*£ ✓**5.9.00*

Committee's Minute

FRI. 7 SEP 1900

Assigned

W. Morrison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.Lloyd's Register
Foundation