5893

REPORT ON MACHINERY.

No. 5893

(Received at London Office 6th NOV. 1882)

No. in Reg. Book. Survey held at Glasgow Date, first Survey Janyr. 1882 Last Survey Novr 4 1882

on the Screw Steamer "Liban" 2236·56 Tons 1433·86

Master Martino Built at Glasgow When built 1882

Engines made at Glasgow By whom made R. Napier & Sons when made 1882

Boilers made at " " By whom made " " " " when made 1882

Registered Horse Power 550 Owners Fraissinet et Cie Port belonging to Marseilles

ENGINES, &c.—

Description of Engines Compound Inverted Direct acting about

Diameter of Cylinders 41" & 75" Length of Stroke 48" No. of Rev. per minute 63 Point of Cut off, High Pressure Variable Low Pressure —

Diameter of Screw shaft 13" Diameter of Tunnel shaft 12½" Diameter of Crank shaft journals 13½" Diameter of Crank pin 14½" size of Crank web 18⅝"

Diameter of screw 16ft- Pitch of screw 21'-6" No. of blades Four state whether moveable Yes total surface 43ft.

No. of Feed pumps Two diameter of ditto 5¼" Stroke 23½" Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two diameter of ditto 4¼" Stroke 23½" Can one be overhauled while the other is at work Yes

Where do they pump from All Compartments

No. of Donkey Engines Two Size of Pumps 4½×24×4½" Where do they pump from Sea Bilge Hotwell & Tanks

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

No. of bilge injections Two and sizes 6" dia Are they connected to condenser, or to circulating pumps To Circulating pumps

How are the pumps worked By Levers

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 Bilge pipes to Forehold How are they protected By wood casing

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

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock On Slip previous to being launched

Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper Platform

BOILERS, &c.—

Number of Boilers Two Description Round Horizontal (double ended)

Working Pressure 75 lbs Tested by hydraulic pressure to 150 lbs Date of test 4·9·82

Description of superheating apparatus or steam chest None

Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately —

No. of square feet of fire grate surface in each boiler 100 ft Description of safety valves Direct Spring

No. to each boiler Two area of each valve 23·75" Are they fitted with easing gear Yes

No. of safety valves to superheater — area of each valve — are they fitted with easing gear —

Smallest distance between boilers and bunkers or woodwork 12"

Diameter of boilers 13'-4¾" Length of boilers 15'-10¾" Description of riveting of shell long. seams Treble riveted circum. seams Double riveted

Thickness of shell plates 1/16" diameter of rivet holes 1" whether punched or drilled Drilled pitch of rivets 4⅞"

Lap of plating 8½" per centage of strength of longitudinal joint 70% working pressure of shell by rules 77 lbs

Size of manholes in shell 12"×16" size of compensating rings Doubling plate fitted

No. of Furnaces in each boiler Four outside diameter 4'-3" length, top 6'-2¼" bottom Straight Chamber

Thickness of plates 9/16" Steel description of joint Double Straps if rings are fitted Half rings on bottom greatest length between rings —

Working pressure of furnace by the rules 83 lbs

Combustion chamber plating, thickness, sides ~~7/16~~ 15/32" Steel back — top 7/16" nuts fitted

Pitch of stays to ditto sides 8"×8" back — top 8"×8"

If stays are fitted with nuts or riveted heads Riveted working pressure of plating by rules 88 lbs

Diameter of stays at smallest part 1" or 1·06 working pressure of ditto by rules 82 lbs

End plates in steam space, thickness 12/16" pitch of stays to ditto 16¼"×16¼" how stays are secured By double nuts

Working pressure by rules 98 lbs diameter of stays at smallest part 2·16" working pressure by rules 145 lbs

Front plates at bottom, thickness 10/16" Back plates, thickness — greatest pitch of stays — working pressure by rules —

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Diameter of tubes 3½" pitch of tubes 4⅝" thickness of tube plates, front 12/16" back 12/16

How stayed by Tubes pitch of stays 13⅜" x 13⅜" width of water spaces about 9"

Diameter of Superheater or Steam chest None length —

Thickness of plates — description of longitudinal joint — diameter of rivet holes — pitch of rivets —

Working pressure of shell by rules — Diameter of flue — thickness of plates —

If stiffened with rings — distance between rings — Working pressure by rules —

End plates of superheater, or steam chest; thickness — How stayed —

Superheater or steam chest; how connected to boiler —

DONKEY BOILER— Description Round Horizontal with through furnace & brick Chamber

Made by R. Napier & Sons ~~By whom made~~ at Glasgow when made 1882

Where fixed On Upper Deck working pressure 70 lbs Tested by hydraulic pressure to 150 lbs No. of Certificate 820

Fire grate area 21.0 ft Description of safety valves Direct Spring No. of safety valves Two area of each 7"

If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No

Diameter of donkey boiler 7' 11" length 5' 3" description of riveting Treble riveted

thickness of shell plates 8/16" diameter of rivet holes 7/8" whether punched or drilled Drilled

pitch of rivets 5½" lap of plating 4¾" per centage of strength of joint 75%

thickness of end ~~crown~~ plates 12/16" stayed by Iron stays 2¼ dia 16" x 15" pitch

Diameter of furnace, top 2' 7" bottom — length of furnace 5' 3"

thickness of plates 7/16" description of joint Double Strapped

thickness of furnace crown plates — stayed by —

Working pressure of shell by rules 86 lbs working pressure of furnace by rules 105 lbs

diameter of uptake — thickness of plates — thickness of water tubes —

The foregoing is a correct description,

R. Napier & Sons. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers are of good workmanship and are now in good order & safe working condition and eligible in my opinion to be noted in the Register Book ✠ Lloyd's M.C. 11.82

Submitted that this vessel is eligible to have the notification + L.M.C. 11.82 recorded
D.G. 6/11/82

The amount of Entry Fee .. £ 3 : 0 : 0 received by me,

Special .. £45 : 0 : 0 Glasgow

Certificate (if required) .. £ Gratis 4/11/1882

To be sent as per margin.

(Travelling Expenses, if any, £)

James Mollison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping
Clyde District

Committee's Minute Tuesday, 7th November, 1882.

+ LMC

Robert Edmund Taylor & Son Printers, 19, Old Street, Goswell Road, London, E.C.