

REPORT ON MACHINERY.

No. 10926

Port of Leith

Received at London Office MON. 12 DEC 1904

No. in Survey held at Grangemouth Date, first Survey 27th October Last Survey 24th November 1904
Reg. Book.

on the Steel Sailing Barge "FORESTAL" (Number of Visits 3) Tons { Gross 705.77
Net 657.42

Master Built at Grangemouth By whom built Grangemouth & Greenock Sh. Co. When built 1904

Engines made at By whom made when made

Boilers made at Blackton By whom made J. Anderson & Co. Ltd. when made 1904

Registered Horse Power Owners Navigation & Vapn. (N. Michmorich) Port belonging to Burness & Co.

Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines

Dia. of Cylinders		Length of Stroke		Revs. per minute	Dia. of Screw shaft		No. of Cranks	
as per rule		as fitted			as per rule		Material of screw shaft	
as fitted		as fitted			as fitted			

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight in the propeller boss 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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush

Dia. of Tunnel shaft	Dia. of Crank shaft journals	Dia. of Crank pin	Size of Crank webs	Dia. of thrust shaft under collars
as per rule	as per rule			
as fitted	as fitted			

Dia. of screw Pitch of screw No. of blades State whether moceable Total surface

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

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

In Engine Room In Holds, &c.

No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size

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

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

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

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight

Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record) Total Heating Surface of Boilers Is forced draft fitted

No. and Description of Boilers		Working Pressure		Tested by hydraulic pressure to	
Date of test <u> </u>		Can each boiler be worked separately <u> </u>		Area of fire grate in each boiler <u> </u>	
each boiler <u> </u>		Area of each valve <u> </u>		Pressure to which they are adjusted <u> </u>	
Smallest distance between boilers or uptakes and bunkers or woodwork <u> </u>		Mean dia. of boilers <u> </u>		Length <u> </u>	
Thickness <u> </u>		Range of tensile strength <u> </u>		Material of shell plates <u> </u>	
Diameter of rivet holes in long. seams <u> </u>		Pitch of rivets <u> </u>		Lap of plates or width of butt straps <u> </u>	
Per centages of strength of longitudinal joint <u> </u>		Working pressure of shell by rules <u> </u>		Size of manhole in shell <u> </u>	
Size of compensating ring <u> </u>		No. and Description of Furnaces in each boiler <u> </u>		Material <u> </u>	
Length of plain part <u> </u>		Thickness of plates <u> </u>		Description of longitudinal joint <u> </u>	
Working pressure of furnace by the rules <u> </u>		Combustion chamber plates: Material <u> </u>		Thickness: Sides <u> </u>	
Pitch of stays to ditto: Sides <u> </u>		Back <u> </u>		Top <u> </u>	
Material of stays <u> </u>		Diameter at smallest part <u> </u>		Area supported by each stay <u> </u>	
Material <u> </u>		Thickness <u> </u>		Pitch of stays <u> </u>	
Diameter at smallest part <u> </u>		Area supported by each stay <u> </u>		Working pressure by rules <u> </u>	
Thickness <u> </u>		Material of Lower back plate <u> </u>		Thickness <u> </u>	
Diameter of tubes <u> </u>		Pitch of tubes <u> </u>		Material of tube plates <u> </u>	
Pitch across wide water spaces <u> </u>		Working pressures by rules <u> </u>		Girders to Chamber tops: Material <u> </u>	
thickness of girder at centre <u> </u>		Length as per rule <u> </u>		Distance apart <u> </u>	
Working pressure by rules <u> </u>		Superheater or Steam chest; how connected to boiler <u> </u>		Can the superheater be shut off and the boiler worked separately <u> </u>	
Diameter <u> </u>		Length <u> </u>		Thickness of shell plates <u> </u>	
Material <u> </u>		Description of longitudinal joint <u> </u>		Diam. of rivet holes <u> </u>	
Pitch of rivets <u> </u>		Working pressure of shell by rules <u> </u>		Diameter of flue <u> </u>	
If stiffened with rings <u> </u>		Distance between rings <u> </u>		Working pressure by rules <u> </u>	
Working pressure of end plates <u> </u>		Area of safety valves to superheater <u> </u>		Are they fitted with easing gear <u> </u>	

W1449-0029

DONKEY BOILER— No. One Description Cylindrical Multitubular
 Made at Stockton By whom made J. Hudson & Co. Ltd. When made 1904 Where fixed Main deck
 Working pressure 120 lb tested by hydraulic pressure to 240 lb. No. of Certificate 3312 Fire grate area 11 1/2 sq ft Description of safety valves Direct spring
 No. of safety valves Two Area of each 3.97 sq ft Pressure to which they are adjusted 120 lb. If fitted with easing gear Yes. If steam from main boilers can enter the donkey boiler Yes Dia. of donkey boiler 7'-0" Length 9'-0" Material of shell plates Steel Thickness 7/32" Range of tensile strength 27-32 Descrip. of riveting long. seams T.R.L. Dia. of rivet holes 7/8" Whether punched or drilled Drilled Pitch of rivets 4 3/8"
 Lap of plating 5/8" Per centage of strength of joint Rivets 88 Thickness of shell and plates 1/16" Radius of do. — No. of Stays to do. 3
 Dia. of stays. 2 1/4" Diameter of furnace Top 36" Bottom 5'-2 1/2" Length of furnace 7'-4"-10" Thickness of furnace plates 9/16" Description of joint Welded Thickness of furnace and plates 3.5 3/8" Stayed by 1 1/2" iron screw stays 7 1/2" x 7 1/2" piled Working pressure of shell by rules 120 lb. Working pressure of furnace by rules 15 lb. Diameter of uptake 2 1/2" Thickness of uptake plates F 1/4" B 3/8" Thickness of water tubes 3/8"

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer. J. Hudson & Co. Ltd.

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - -
 Total No. of visits 3

Is the approved plan of main boiler forwarded herewith None

" " " donkey " " " Yes

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

The donkey boiler of this vessel has been constructed under special survey, it has been secured on board in a satisfactory manner + in my opinion renders the vessel eligible for the record of D.B. 74. Particulars of Donkey Boiler is forwarded herewith

It is submitted that this vessel is eligible for THE RECORD. + DB. 11-04

Bal

12.12.04

12.12.04

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27016	10	0	12	Stainless	12	0	0	0	10	0	0	R. & S. & Co. Ltd.	Exeter
27015	7	0	4	"	11	2	2	0	0	0	0	"	"
	17	0	16						18	0	0		
4680	4	0	14	1	0	7	6	10	0	0	4	0	0

3904	60	1	12	34.0.4	60-1" class	Exeter	17/9/04
1400	20	7 1/2	10 1/4	5.2.7	20-7 1/2	"	"
	75	2 1/2	13		75-2 1/2	"	"

The amount of Entry Fee. £ :
 Special £ :
 Donkey Boiler Fee .. . £ :
 Travelling Expenses (if any) £ :

When applied for, 19
 When received, 19
G. Williamson
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI, 16 DEC 1904
 Assigned + DB. 11.04



Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.