

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office SEP 10 1901

Survey held at Dumbarton

Date, first Survey 15 March Last Survey August 1901

(Number of Visits 19)

on the Ss No 66 by Lloyd Austriaco, Societa di Navigazione a Vapore del

Built at Trieste By whom built above named Company When built

made at Dumbarton By whom made Denny & Co when made 1901

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rated Horse Power _____ Owners _____ Port belonging to _____

Horse Power as per Section 28 348 Is Refrigerating Machinery fitted _____ Is Electric Light fitted _____

INES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three

of Cylinders 23 - 38 - 63 Length of Stroke 48 Revs. per minute _____ Dia. of Screw shaft _____ Lgth. of stern bush _____

of Tunnel shaft _____ Dia. of Crank shaft journals _____ Dia. of Crank pin 13 1/8 Size of Crank webs 16 1/2 x 8 1/2 Dia. of thrust shaft under _____

s 13 1/8 Dia. of screw _____ Pitch of screw _____ No. of blades _____ State whether moveable _____ Total surface _____

of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 23 Can one be overhauled while the other is at work _____

of Bilge pumps 1 Diameter of ditto 5 1/2 Stroke 23 Can one be overhauled while the other is at work _____

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

Engine Room _____ In Holds, &c. _____

of bilge injections _____ sizes _____ Connected to condenser, or to circulating pump _____ Is a separate donkey suction fitted in Engine room & size _____

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 _____

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

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 _____

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 _____

at pipes are carried through the bunkers _____ How are they protected _____

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

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

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

is fitted with a watertight door _____ worked from _____

MAKERS, &c.— (Letter for record R) Total Heating Surface of Boilers 463489 ft. Is forced draft fitted Yes

and Description of Boilers 2: byland: hull: Single End Working Pressure 200 lb Tested by hydraulic pressure to 400 lb

Can each boiler be worked separately ✓ Area of fire grate in each boiler 564 No. and Description of safety valves to _____

Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____

Mean dia. of boilers 14' 9" Length 11' 8" Material of shell plates Steel

Are they welded or flanged No Descrip. of riveting: cir. seams Double Rivet long. seams Dble Butt Straps

Pitch of rivets 9" Lap of plates or width of butt straps 21 1/4"

Working pressure of shell by rules 227 lb Size of manhole in shell 16" x 12"

No. and Description of Furnaces in each boiler 3: Deighton's Material Steel Outside diameter 47 1/4"

Description of longitudinal joint weld No. of strengthening rings None

Combustion chamber plates: Material Steel Thickness: Sides 5" Back 5" Top 7/8" Bottom 5/8"

Working pressure by rules 218 lb If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 218 lb

Material of stays Iron Diameter at smallest part 1 1/2" Area supported by each stay 63" Working pressure by rules 241 lb End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 15 1/2" How are stays secured Dble nuts Working pressure by rules 208 lb Material of stays Steel

Diameter at smallest part 2 1/8" Area supported by each stay 241" Working pressure by rules 233 lb Material of Front plates at bottom Steel

Thickness 1 1/8" Material of Lower back plate Steel Thickness 1 1/8" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 254 lb

Material of tube plates Steel Thickness: Front 3/32" Back 3/4" Mean pitch of stays 7 1/4"

Working pressures by rules 214 lb Girders to Chamber tops: Material Steel Depth and

Distance apart 7 1/8" Number and pitch of Stays in each 3: 4 1/2"

Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

Material _____ Description of longitudinal joint _____ Diam. of rivet _____

Material of flue plates _____ Thickness _____

End plates: Thickness _____ How stayed _____

Area of safety valves to superheater _____ Are they fitted with easing gear _____



DONKEY BOILER— No. *One* Description *Cylindrical multi with one Deighton's furn*
partly Made at *Dumbarton* By whom made *Denny 1601* When made *1901*. Where fixed
 Working pressure *165 lbs* tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____
 No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boiler _____
 enter the donkey boiler _____ Dia. of donkey boiler *8' 11 1/8"* Length *8' 6 5/16"* Material of shell plates *Steel* Thickness *3/32"* Range of _____
 strength *28-32 tons* Descrip. of riveting long. seams *Double Butt Straps* Dia. of rivet holes *1"* Whether punched or drilled *Drilled* Pitch of rivets _____
 Lap of plating *1 3/4"* Per centage of strength of joint _____ Rivets *116* Plates *878* Thickness of shell plates _____ Radius of do. _____ No. of Stays to do. *14*
 Dia. of stays. *2 1/2"* Diameter of furnace Top *48 1/4"* Bottom _____ Length of furnace *6 feet* Thickness of furnace plates *3/16"* Descrip. _____
 joint *Weld.* Thickness of furnace crown plates *3/16"* Stayed by *1 3/8" Strap Iron 7/8 x 8. 7/4 x 8. 7/4 x 8.* Working pressure of shell by rules _____
 Working pressure of furnace by rules *183 lbs*: Diameter of uptake *3 1/4"* Thickness of uptake plates *13/16"* Thickness of _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Denny 1601

Dates { During progress of work in shops - - *1901. Mar. 15. 21. 27. Apr. 9. 18. 26. 30. May. 3. 8. 15. 24. 31. Jun. 11. 11.*
 of Survey while building { During erection on board vessel - - *21. 27. Jul. 2. Aug. 2.*
 Total No. of visits *19.*

Is the approved plan of main boiler forwarded herewith _____
 " " " donkey " " " _____

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

Material of screw shaft _____ 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 non-corrosive _____ If two liners are fitted, is the shaft lapped or protected between the liners _____

The Boilers of this vessel have been partly constructed at _____ and the various pieces forwarded to Trieste where they will be riveted & reamed, and all stays and tubes be fitted. The main engines have been fitted and practically finished. Denny supplied the crank & Thrust shafts, but the other shafts and necessary fittings will be supplied at Trieste.

The workmanship throughout is good and when complete the machinery will be eligible in my opinion to the usual record; provided, it is finished to the satisfaction of the Society's surveyors at Trieste.

The amount of Entry Fee, £ _____ When applied for, _____
 Special _____
 Donkey Boiler Fee *£ 20* *To be collected at Trieste and credited to this port* _____
 Travelling Expenses (if any) £ _____

Wm R. Austin
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute *Glasgow. 9-SEP.1901*

TUES. MAR 25 1902

Assigned *Deferred for completion.*



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