

REPORT

No. 4445

No. in Survey held at Renfrew
Reg. Book.

on the Machinery of

Master A. Nicholas Built at Renfrew

Engines made at Renfrew By whom made

Boilers made at Glasgow By whom made

Registered Horse Power 210 Owners Mrs

ENGINES, &c.—

Description of Engines Triple Expansion (Turbo)
Diameter of Cylinders 14" 24" 13" Length of Stroke 30" No. of Rev. 1
Diameter of Screw shaft 4 1/8" Diam. of Tunnel shaft 4 1/4" Diam. of Crank shaft 1 1/2"
Diameter of screws 8" 6" 8" 2" Pitch of screws 1 2" 9" No. of 6
No. of Feed pumps One diameter of ditto 3 1/2" Stroke 16" Can one be 6
No. of Bilge pumps One diameter of ditto 3 1/2" Stroke 16" Can one be 6
Where do they pump from Iron All compartments
No. of Donkey Engines Two Size of Pumps 5 1/4" x 3 1/2" x 5"
6" x 4" x 6"

Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are they 6
No. of bilge injections Two and sizes 2 1/4" Are they connected to condenser, or to circulating 6
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 6
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 6
How are the pipes carried through the bunkers Bilge pipes How are they protected By wood
Are the 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
Were stern tube, propeller, screw shaft, and all connections examined in dry dock On slip previous to
Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Below

BOILERS, &c.—

Number of Boilers Three Description High-Pressure Whether Steel or Iron Steel
Working Pressure 150 lbs. Tested by hydraulic pressure to 300 lbs. Date of test Two boilers 3
Description of ~~superheating apparatus or~~ steam chest Vertical
Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately yes
No. of square feet of fire grate surface in each boiler 36.6 ft Description of safety valves Direct Spring No. to 6
Area of each valve 9.6 area Are they fitted with easing gear yes No. of safety valves to superheater 1 area 6
Are they fitted with easing gear yes Smallest distance between boilers and bunkers or woodwork 6 Diameter 6
Length of boilers 9-6 description of riveting of shell long. seams Butt Three rows circum. seams Lap double
Diameter of rivet holes 1 1/4" whether punched or drilled Drilled pitch of rivets 3 7/8" & 7 3/4" Lap of plate 6
Percentage of strength of longitudinal joint 84 working pressure of shell by rules 160 lbs size of manholes in 6
No. of compensating rings 1 description of joint Weld thickness of plates 17/32" description of joint Weld
Outside diameter 43" length, top 6-3" bottom 6-3" thickness of plates 17/32" description of joint Weld
Greatest length between rings 15" working pressure of furnace by the rules 151 lbs combustion chamber plating, thickness, sides 12
Pitch of stays to ditto, sides 7 x 7" back 7 1/2 x 7" top 7 x 7 1/2" If stays are fitted with nuts or riveted heads Nuts
rules 150 lbs Diameter of stays at smallest part 1 3/16" & 1 1/2" working pressure of ditto by rules 180 lbs end plates in steam 6
Pitch of stays to ditto 15" how stays are secured Nuts & washers working pressure by rules 12
smallest part 2 1/2" diam. working pressure by rules 104 lbs Front plates at bottom, thickness 12
Greatest pitch of stays 7 1/2 x 7" working pressure by rules 150 lbs Diameter of tubes 3 1/2" dia pitch 15 1/2"
plates, front 1 7/16" back 1 1/16" how stayed Tubes pitch of stays 15 1/2"
Diameter of Superheater or Steam chest 30" length 27" thickness of plates 9/16" description of longitu 6
Pitch of rivets 3" working pressure of shell by rules 500 diameter of flue 6" thickness of 6
Distance between rings 6" working pressure by rules 500 end plates of superheater, or steam chest 6
Superheater or steam chest; how connected to 6

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fixed
 ate area description of safety
 easing gear steam from n
 description of riveting
 pitch of rivets lap of plating
 description of joint
 working pressure of shell by rules
 thickness of plates thickness of water tubes

2 sets of
 Connecting rod bolts, 2 sets of
 Connecting rod brasses
 3 valve springs for safety relief valves
 1 boiler tube
 1 boiler
 1 boiler
 1 boiler

which
 together with the
 Auxiliary Engines 12" dia
 of good materials and workmanship
 exercised in carrying out all the details
 of the wheels and other gear is of cast steel
 to be most suitable for this kind of work where the
 to severe strains.

completion of the work the Dredging Capabilities of the
 the new Lidal Harbour at Greenock amongst stiff
 clay, and the whole found to work satisfactorily
 at a mean draught of 13' 11", a Trial of Speed
 at the measured mile at Helmsdale with the following

Rev	Time	Speed	Run
50 - 24 - 98-98	4.34	4.9 knots	Proa
50 - 24 - 98-98	8.24	4.14 "	Stern
50 - 24 - 92-96	7.42	4.8 "	Stern
4.946 Mean Speed			

and Boilers in good + safe working
 condition to be noted in the
 Book **L.M.C.**

received by me,
 21/12/1881
 L.M.C.

Allison Walker
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 Clyde District

