

REPORT ON MACHINERY.

No. 28004

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Date of writing Report 2-8-1909 When handed in at Local Office 13/8/1909 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 22nd October 1908 Last Survey 14th August 1909
 Reg. Book. on the S/S "Glenshiel" (Number of Visits 64) Gross 4798.13 Tons Net 3054.21
 Master A. Ellis Built at Glasgow By whom built C. C. O'Leary When built 1909
 Engines made at Glasgow By whom made Dunsen & Jackson Ltd when made 1909
 Boilers made at ditto By whom made ditto when made 1909
 Registered Horse Power Owners Jas. Gardiner & Co. Port belonging to Glasgow
 Nom. Horse Power as per Section 28 513 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24"-43"-42" Length of Stroke 48" Revs. per minute 1275 Dia. of Screw shaft as per rule 14.12" Material of screw shaft Iron
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
 in the propeller boss Yes 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 5'-0 1/2"
 Dia. of Tunnel shaft as per rule 13.12" Dia. of Crank shaft journals as per rule 13.40" Dia. of Crank pin 14 1/4" Size of Crank webs 28.97" Dia. of thrust shaft under
 collars 14 1/4" Dia. of screw 14.6" Pitch of Screw 18-6" No. of Blades 4 State whether moveable Yes Total surface 95.8
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 5 Sizes of Pumps 2 1/2", 2 1/2", 2 1/2", 2 1/2", 2 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2-3 1/2" Strokehold 2-3 1/2" In Holds, &c. 2-3 1/2" in each hold
 No. of Bilge Injections 1 sizes 5 1/2" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"
 Are 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 —
 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 None How are they protected —
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Dates of examination of completion of fitting of Sea Connections Aug 2nd of Stern Tube Aug 2nd Screw shaft and Propeller Aug 2nd
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper Eng Room Platform
 BOILERS, &c.—(Letter for record S) Manufacturers of Steel Colville

Total Heating Surface of Boilers 4680 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single Ended
 Working Pressure 180 Tested by hydraulic pressure to 360 lbs Date of test 14.6.09 No. of Certificate 9967
 Can each boiler be worked separately Yes Area of fire grate in each boiler 49.846 No. and Description of Safety Valves to
 each boiler Double Spring Area of each valve 8.29" Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 15.138" Length 12.6" Material of shell plates S
 Thickness 3/8" Range of tensile strength 28-32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams DR
 long. seams TR & DBS Diameter of rivet holes in long. seams 17/16" Pitch of rivets 9 1/8" Lap of plates or width of butt straps 1-9 1/4"
 Per centages of strength of longitudinal joint rivets 88.5% plate 86.3 Working pressure of shell by rules 201 Size of manhole in shell 16 1/2"
 Size of compensating ring McNeil No. and Description of Furnaces in each boiler 3 Monomaterial S Outside diameter 3-10"
 Length of plain part top bottom Thickness of plates crown 9 1/16" bottom Description of longitudinal joint weld No. of strengthening rings —
 Working pressure of furnace by the rules 184 Combustion chamber plates: Material S Thickness: Sides 2 1/2" Back 5 7/8" Top 2 1/2" Bottom 2 9/32"
 Pitch of stays to ditto: Sides 8x9 1/2" Back 7 1/8x9 1/8" Top 9 1/8x8 1/8" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 190
 Material of stays S Diameter at smallest part 9.232" Area supported by each stay 78.45" Working pressure by rules 194 End plates in steam space:
 Material S Thickness 13/32" Pitch of stays 18 3/4x15 1/4 How are stays secured DN Working pressure by rules 188 Material of stays S
 Diameter at smallest part 5.79" Area supported by each stay 28.45" Working pressure by rules 205 Material of Front plates at bottom S
 Thickness 3/32" Material of Lower back plate S Thickness 7/8" Greatest pitch of stays 19 1/2" Working pressure of plate by rules 193
 Diameter of tubes 2 1/2" Pitch of tubes 33 1/4x3 1/16" Material of tube plates S Thickness: Front 31/32" Back 13/16" Mean pitch of stays at 93/8"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 194 Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 11 1/2" (2) Length as per rule 3-3 Distance apart 8 1/8" Number and pitch of stays in each 3 at 9 1/8"
 Working pressure by rules 201 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
 separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. Description *Please see attached Report.*

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety

Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment

If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length

Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams

Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets

Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays

Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint

Working pressure of furnace by rules Thickness of furnace crown plates Stayed by

Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:—

Propeller shaft. 2 Connecting Rod Bolts & Nuts for each ind. 2 Main Bearing Bolts. 1 Set of Coupling Bolts. 1 Set of Feed & Bilge Pump Valves. 1 Set of Piston Rings for H.P. & I.P. A quantity of assorted Bolt & Nut. Iron of various sizes.

The foregoing is a correct description,

of DUNSMUIR & JACKSON, Limited.

James Fletcher

Manufacturer.

Dates of Survey while building

During progress of work in shops— 1908. Oct. 22, 26, 28, 30. Nov. 4, 9, 12, 14, 19, 24. Dec. 3, 7, 9, 14, 19, 23, 29. 1909: Jan. 12, 14, 19, 26, 29.

During erection on board vessel— Feb. 1, 4, 9, 11, 13, 22, 24, 27. Mar. 1, 11, 15, 17, 22, 29. Apr. 6, 8, 10, 17, 23, 27. May 6, 13, 19, 26, 27. June 1, 12, 14, 10, 14.

Total No. of visits 64.

Is the approved plan of main boiler forwarded herewith *Yes* *64* *1908* *1909* *1910* *1911* *1912* *1913* *1914* *1915* *1916* *1917* *1918* *1919* *1920* *1921* *1922* *1923* *1924* *1925* *1926* *1927* *1928* *1929* *1930* *1931* *1932* *1933* *1934* *1935* *1936* *1937* *1938* *1939* *1940* *1941* *1942* *1943* *1944* *1945* *1946* *1947* *1948* *1949* *1950* *1951* *1952* *1953* *1954* *1955* *1956* *1957* *1958* *1959* *1960* *1961* *1962* *1963* *1964* *1965* *1966* *1967* *1968* *1969* *1970* *1971* *1972* *1973* *1974* *1975* *1976* *1977* *1978* *1979* *1980* *1981* *1982* *1983* *1984* *1985* *1986* *1987* *1988* *1989* *1990* *1991* *1992* *1993* *1994* *1995* *1996* *1997* *1998* *1999* *2000* *2001* *2002* *2003* *2004* *2005* *2006* *2007* *2008* *2009* *2010* *2011* *2012* *2013* *2014* *2015* *2016* *2017* *2018* *2019* *2020* *2021* *2022* *2023* *2024* *2025* *2026* *2027* *2028* *2029* *2030* *2031* *2032* *2033* *2034* *2035* *2036* *2037* *2038* *2039* *2040* 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*2184* *2185* *2186* *2187* *2188* *2189* *2190* *2191* *2192* *2193* *2194* *2195* *2196* *2197* *2198* *2199* *2200* *2201* *2202* *2203* *2204* *2205* *2206* *2207* *2208* *2209* *2210* *2211* *2212* *2213* *2214* *2215* *2216* *2217* *2218* *2219* *2220* *2221* *2222* *2223* *2224* *2225* *2226* *2227* *2228* *2229* *2230* *2231* *2232* *2233* *2234* *2235* *2236* *2237* *2238* *2239* *2240* *2241* *2242* *2243* *2244* *2245* *2246* *2247* *2248* *2249* *2250* *2251* *2252* *2253* *2254* *2255* *2256* *2257* *2258* *2259* *2260* *2261* *2262* *2263* *2264* *2265* *2266* *2267* *2268* *2269* *2270* *2271* *2272* *2273* *2274* *2275* *2276* *2277* *2278* *2279* *2280* *2281* *2282* *2283* *2284* *2285* *2286* *2287* *2288* *2289* *2290* *2291* *2292* *2293* *2294* *2295* *2296* *2297* *2298* *2299* *2300* *2301* *2302* *2303* *2304* *2305* *2306* *2307* *2308* *2309* *2310* *2311* *2312* *2313* *2314* *2315* *2316* *2317* *2318* *2319* *2320* *2321* *2322* *2323* *2324* *2325* *2326* 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