

Rpt. 4a.

REPORT ON MACHINERY.

No. 20544

Received at London Office APR - 6 1938

Date of writing Report 31st Jan 1938 When handed in at Local Office 31st Jan 1938 Port of GREENOCK.
 No. in Survey held at Port Glasgow Date, First Survey 4th NOVEMBER 1934 Last Survey 21st Dec. 1937
 Reg. Book Suppl. 39198 on the S.S. "MACHARDA" (Number of Visits FIVE)

Master Built at Port Glasgow By whom built W. Hamilton & Co. Ltd. When built 1938-3.
 Engines made at Glasgow By whom made D. Rowan & Co. Ltd. when made 1938.
 Boilers made at Do. By whom made Do. when made 1938.
 Registered Horse Power Owners J. & J. Buchlebank Ltd. Port belonging to Liverpool
 Shaft Horse Power at Full Power Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Gross 7997.67
 Net 4762.29
 Tons

TURBINE ENGINES, &c.—Description of Engines

No. of Turbines
 Diameter of Rotor Shaft Journals, H.P. L.P. Diameter of Pinion Shaft
 Diameter of Journals Distance between Centres of Bearings Diameter of Pitch Circle
 Diameter of Wheel Shaft Distance between Centres of Bearings Diameter of Pitch Circle of Wheel
 Width of Face Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule
 No. of Screw Shafts One Diameter of same as fitted Diameter of Propeller Pitch of Propeller
 No. of Blades 4 State whether Moveable No Total Surface Diameter of Rotor Drum, H.P. L.P. Astern
 Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine Propeller

PARTICULARS OF BLADING.

	H.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION									
2ND									
3RD									
4TH									
5TH									
6TH									
7TH									
8TH									

No. and size of Feed pumps
 No. and size of Bilge pumps
 No. and size of Bilge suction 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 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 Both
 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 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
 Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
 Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate
 Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler
 Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
 Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 plates
 Size of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter
 Length of plain part top crown Description of longitudinal joint No. of strengthening rings
 bottom Thickness of plates bottom
 Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
 Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
 Working pressure by rules Steam dome: description of joint to shell % of strength of joint Diameter
 Thickness of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets
 Working pressure of shell by rules Crown plates: Thickness How stayed



SUPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____
 Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____
 Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____

IS A DONKEY BOILER FITTED? _____ If so, is a report now forwarded? _____

SPARE GEAR. State the articles supplied:— _____

The foregoing is a correct description, _____
 _____ Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
 { During erection on board vessel - - }
 Total No. of visits 5. (1934) Nov. 4-5-19. Dec. 8-21.
 Is the approved plan of main boiler forwarded herewith _____
 " " " donkey " " " _____

Dates of Examination of principal parts—Casings _____ Rotors _____ Blading _____ Gearing _____

Rotor shaft _____ Thrust shaft _____ Tunnel shafts *Fitting of* Screw shaft, *sea connections* Propeller 21-12-37

Stern tube _____ Steam pipes tested _____ Engine and boiler seatings 8-11-37 Engines holding down bolts _____

Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material and tensile strength of Rotor shaft _____ Identification Mark on Do. _____

Material and tensile strength of Pinion shaft _____ Identification Mark on Do. _____

Material of Wheel shaft _____ Identification Mark on Do. _____ Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes _____ Test pressure _____

Is an installation fitted for burning oil fuel _____ Is the flash point of the oil to be used over 150°F. _____

Have the requirements of Section 49 of the Rules been complied with _____

Is this machinery a duplicate of a previous case _____ If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c. *Fitting of sea connections, screw shaft & propeller also riveting of engine & boiler seats (latter left partly loose) examined. The vessel has been towed to Glasgow & have machinery fitted.*)

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

	When applied for,	When received,
The amount of Entry Fee ... £	19	
Special ... £		
Donkey Boiler Fee ... £		19
Travelling Expenses (if any) £		

Boyle
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 5 - APR 1938**

Assigned *See Gls Rpt No 59569*