

# REPORT ON MACHINERY.

No. 16852  
THU. APR. 15. 1915

Received at London Office

Date of writing Report 14/4/15 When handed in at Local Office 14/4/15 Port of Glenock  
 No. in Survey held at Port Glasgow Date, First Survey 11/11/14 Last Survey 18/1/15  
 Reg. Book. on the S.S. "CHRONOS" (Number of Visits 3)  
 Master W. Wills Built at Port Glasgow By whom built W. Hamilton & Co Ltd Tons } Gross  
 Engines made at Glasgow By whom made D. Rowan & Co When built 1915 } Not  
 Boilers made at By whom made when made  
 Registered Horse Power Owners Australian Steamship (Howard Smith & Co Ltd) Port belonging to Melbourne.  
 Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

## ENGINES, &c.—Description of Engines

|   |  |  |  |
|---|--|--|--|
| Description of Engines  |  | No. of Cylinders   | No. of Cranks  |
| Dia. of Cylinders   | Length of Stroke                                   | Revs. per minute   | Dia. of Screw shaft as per rule as fitted                  |
| Is the screw shaft fitted with a continuous liner the whole length of the stern tube                                      |  | Material of screw shaft  |  |
| in the propeller boss   |  | Is the after end of the liner made water tight                       |  |
| 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 as per rule as fitted  | Dia. of Crank shaft journals as per rule as fitted | Dia. of Crank pin  | Size of Crank webs   |
| collars   | 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   | Both   |
| 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 | 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 |  |  |  |
| Dates of examination of completion of fitting of Sea Connections  |  | 20/11/14 of Stern Tube   | 20/11/14 Screw shaft and Propeller 18/1/15                 |
| 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         |   |
| long. seams  | Diameter of rivet holes in long. seams              | Pitch of rivets                                | Descrip. of riveting: cir. seams                      |
| Per centages of strength of longitudinal joint                       | Working pressure of shell by rules                  | Size of manhole in shell                       |   |
| Size of compensating ring  | No. and Description of Furnaces in each boiler      |  | Material  |
| Length of plain part top bottom                                      | Thickness of plates crown bottom                    | Description of longitudinal joint              |   |
| 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 |   |
| Material of stays  | Diameter at smallest part                           | Area supported by each stay                    | Working pressure by rules                             |
| Material   | Thickness   | Pitch of stays                                 | How are stays secured                                 |
| 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                               |
| Diameter of tubes  | Pitch of tubes                                      | Material of tube plates                        | Thickness: Front Back                                 |
| Pitch across wide water spaces                                       | Working pressures by rules                          | Girders to Chamber tops: Material              |   |
| thickness of girder at centre  | Length as per rule                                  | Distance apart                                 | Number and pitch of stays in each                     |
| Working pressure by rules  | 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                             |
| holes  | Pitch of rivets                                     | Working pressure of shell by rules             | Diameter of flue                                      |
| If stiffened with rings  | Distance between rings                              | Working pressure by rules                      | End plates: Thickness                                 |
| Working pressure of end plates                                       | Area of safety valves to superheater                | Are they fitted with easing gear               |   |

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

Is the approved plan of main boiler forwarded herewith

“ “ “ donkey “ “ “

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Steam pipes tested Engine and boiler seatings 18 11 16 Engines holding down bolts Completion of pumping arrangements Boilers fixed Engines tried under steam Main boiler safety valves adjusted Thickness of adjusting washers Material of Crank 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 duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. Propeller, & fastenings of sea connections examined before launching, & found in order.

Certificate (if required) to be sent to

The Surveymen are requested not to write on or below the space for Committee's Minute.

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

FRI. APR. 16. 1915

Committee's Minute

Assigned See minute or file yd attached

Harbottle Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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