

## REPORT ON MACHINERY.

No. 6215.

Received at London Office

TUE. SEP-8. 1914

Date of writing Report 4 Sept 1914. When handed in at Local Office

19 Port of Amsterdam

No. in Survey held at Amsterdam

Date, First Survey 9 Decem. 1913 Last Survey 9 August 1914.

Reg. Book. 893 on the steam motor vessel Illene.

(Number of Visits 57)

Tons Gross 3738.

Net 2244.

Master G. Bouw Built at Dundee

By whom built Caledon S.B. &amp; Co. Ltd. When built 1914.

Engines made at Amsterdam By whom made Werkspoor

when made 1914.

Boilers made at Dundee By whom made Caledon S.B. &amp; Co. Ltd.

when made 1914.

Registered Horse Power

Owners Ned Indische Bank Stoomboot Port belonging to Gravenhage

Nom. Horse Power as per Section 28 414 375

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted Yes.

ENGINES, &amp;c.—Description of Engines Single Acting 4 cycle Werkspoor No. of Cylinders 12 No. of Cranks 12

Dia. of Cylinders 520 Length of Stroke 900 Revs. per minute 130 Dia. of Screw shaft as per rule as fitted 110 Material of screw shaft S.M.A.N. (NGST) STEEL

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 Yes. If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 1100

Dia. of Tunnel shaft as per rule as fitted 150 Dia. of Crank shaft journals as per rule as fitted 120 Dia. of Crank pin 320 Size of Crank webs 160x450 Dia. of thrust shaft under

collars 270 Dia. of screw 1500 Pitch of Screw 2800 No. of Blades 4 State whether moveable No Total surface 3.14 16

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps three Diameter of ditto Stroke 150 Can one be overhauled while the other is at work

No. of Donkey Engines ballast pumps Sizes of Pumps 8x8x10 inches No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 fuel donkeys 8x8x10 inches In Holds, &amp;c. two diam 4" two diam 1 1/2" In pump room

two diam 3" in forepeak one diam 3 1/2" No. of Bilge Injections two sizes 80 double acting cooling pumps 160x300

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 none

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 Yes

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 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 of Stern Tube Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

## BOILERS, &amp;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

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

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 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

See Report No. 6207.

W1644-0114

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FOR  
VERTICAL DONKEY BOILER—

See Dundee Report No. 7818.  
Manufacturers of Steel

No. \_\_\_\_\_ Description \_\_\_\_\_  
Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate 942 Fire grate area \_\_\_\_\_ Description of Safety Valves \_\_\_\_\_  
No. of Safety Valves two Area of each  $\frac{1}{2}$  Pressure to which they are adjusted 120 lbs Date of adjustment 29 Aug 1914  
If fitted with casing gear Yes 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 \_\_\_\_\_  
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 \_\_\_\_\_ Radius of do. \_\_\_\_\_ Stayed by \_\_\_\_\_  
Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

SPARE GEAR. State the articles supplied:—two cylinders & three pistons complete, 158 Springs, 1 screw on 1 triple throw Crankshaft, 2 sets of top & bottom ends & bearing brasses with bolts for each set, 12 Coupling bolts, 2 guide faces & shoes, One HP-IP and LP air compressors with coolers (receivers) and complete set of valves, valves for bilge & cooling pumps, starting air, 16 in & outlets for cylinders, 3 thrust shafts, bolts & nuts, assorted gear for auxiliaries & donkey boiler & condenser.  
The foregoing is a correct description,  
WERKSPOR O. Kloos. Manufacturer.

Dates of Survey while building { During progress of work in shops - - 9-11 Dec 1913, 2, 14, 20, 22, 28, 30 Jan., 20-27 Febr., 3, 12, 23 March, 8, 15, 16 April, 20, 23, 27, 28, 30 April, 1, 2, 4, 7, 11, 14, 20, 25, 26, 28 May, 9, 11, 22, 25 June, 1914  
During erection on board vessel - - - - -  
Total No. of visits 51 visits  
Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts—Cylinders 10, 17, 23, 17, 16, 26 Slides \_\_\_\_\_ Covers ditto \_\_\_\_\_ Pistons 4, 7, 11, 21, 27, 10, 2 Rods ditto, \_\_\_\_\_  
Connecting rods ditto \_\_\_\_\_ Crank shaft 1, 2, 3, 15, 23, 18 Thrust shafts ditto Tunnel shafts Report Screw shaft 8, 7818 Propeller ditto, \_\_\_\_\_  
Stern tube ditto \_\_\_\_\_ Steam pipes tested \_\_\_\_\_ Engine and boiler seatings 16, 23, 27, 1, 2, 4, 7, 11, 24, 28 Engines holding down bolts 29, 21, 29 \_\_\_\_\_  
Completion of pumping arrangements 24 August \_\_\_\_\_ Boilers fixed \_\_\_\_\_ Engines tried under steam 25 and 29 August \_\_\_\_\_  
Donkey boiler safety valves adjusted 29 Aug \_\_\_\_\_ Thickness of adjusting washers 9 and 10 \_\_\_\_\_  
Material of Crank shafts Lloyds Identification Mark on Do. MB 387-10.15 Material of Thrust shaft Lloyds Identification Mark on Do. MB 50-6-11 MB 51-6-11  
Material of Tunnel shafts Lloyds Identification Marks on Do. MB 36-10-13 Material of Screw shafts Lloyds Identification Marks on Do. HK 4820-11-6 MB 37-6-13  
Material of Steam Pipes Copper \_\_\_\_\_ Test pressure 240 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. This vessel's thrust shafts and blocks having been fitted by the Shipbuilders at Dundee (See Report Dundee No. 7818) have been removed in order to improve the seats of do for thrust and motor seats See Amsterdam hull Report No. 6216. This vessel's machinery has been constructed and fitted in an efficient manner, material used of good quality and tested as required and workmanship throughout good. Starting air reservoirs tested to 36 atm and its safety valves adjusted to 18 atm. All cylinders and compressors of main & auxiliary motors inclusive coolers, chests, waterjackets, air and fuel bottles tested under hydraulic pressure with satisfactory results.

Attended main & auxiliary machinery on several trials and while at sea, found same working most satisfactory & motors hard down on their seats, pumps drawing from all compartments. The Society's rule also as regards the burning of liquid fuel fully carried out. We are of opinion that this vessel should be recorded in the Reg. Bo.

The amount of Entry Fee .. £ 36 : When applied for, \_\_\_\_\_  
Special .. £ 488.40 : \_\_\_\_\_  
Donkey Boiler Fee .. £ : \_\_\_\_\_  
Travelling Expenses (if any) £ 15.40 : \_\_\_\_\_  
When received, \_\_\_\_\_

Committee's Minute

Assigned

FRI. SEP. 11. 1914

+ L.M.C. 8.14  
oil engines

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



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Certificate (if required) to be sent to Surveyors Amsterdam

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

MACHINERY CERTIFICATE  
WRITTEN