Rpt. 4.

REPORT ON MACHINERY.

No. 6957. b

Received at London Office MON. 15 MAY. 1916

Date of writing Report 9 May 1916 When handed in at Local Office ____ 19__ Port of Amsterdam

No. in Reg. Book. 35 in Stp Survey held at Lutt Bommel. Date, First Survey 19 February Last Survey 1st April 1916 Number of Visits 4.

on the H de Gr Ots Tetrax. yard No 427. Tons Gross 996. Net 436.

Master M de Boer Built at Lutt Bommel By whom built J. Meijers S. B. Co When built 1916

Engines made at Rotterdam By whom made Burgerhout Machine fabriek when made 1916

Boilers made at Rotterdam By whom made Burgerhout Machine fabriek when made 1916

Registered Horse Power ____ Owners Hudig en Pieters Port belonging to Rotterdam

Nom. Horse Power as per Section 28 185 ✓ Is Refrigerating Machinery fitted for cargo purposes — Is Electric Light fitted Yes. ✓

ENGINES, &c.—Description of Engines ____ No. of Cylinders ____ No. of Cranks ____

Dia. of Cylinders ____ Length of Stroke ____ Revs. per minute 85 Dia. of Screw shaft as per rule 10 15/16 as fitted ____ Material of screw shaft } Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube ____ 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 ____

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 ____ Dia. of thrust shaft under collars ____ Dia. of screw ____ Pitch of Screw ____ No. of Blades ____ State whether moveable ____ 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 1 Duplex. Sizes of Pumps 7 1/2 x 8 1/2 x 14"; 7 1/2 x 5 x 6" ✓ No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four o' 2 3/4 ✓ In Holds, &c. two in No 1 hold for bilges 2"; fore peak tank 2 3/4 ✓

One in No 1 tank 2 1/2"; three in No 2 tank 2 1/2" and 2 1/4"; three in ER tank 2 1/4". 2 in No 4 tank 2 1/2" and 2 1/4", 2 bilge suctions in after hold 2 1/2". One in after peak tank

No. of Bilge Injections 1 sizes 6 1/4 Connected to ~~condenser, or~~ to circulating pump ____ Is a separate Donkey Suction fitted in Engine room & size Yes 1 - 4 1/4"

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 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

Is the Screw Shaft Tunnel watertight Yes ✓ Is it fitted with a watertight door Yes ✓ worked from top platforms ✓

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

Total Heating Surface of Boilers 3360 ft 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 192 lbs ✓ Are they fitted with easing gear Yes. ✓

Smallest distance between boilers or uptakes and bunkers or woodwork no Bunkers 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 ____ plate ____ Working pressure of shell by rules ____ Size of manhole in shell ____

Size of compensating ring ____ No. and Description of Furnaces in each boiler 2 Morison ✓ Material ____ Outside diameter ____

Length of plain part top ____ bottom ____ Thickness of plates crown ____ bottom ____ 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 ____ Area 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 ____

Area 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 ____ Diam. 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 ____

ameter of Safety Valve ____ Pressure to which each is adjusted ____ Is Easing Gear fitted ____

If not, state whether, and when, one will be sent ?

If a Report also sent on the Hull of the Ship ?

2m.1,16. T.

W806-0015

IS A DONKEY BOILER FITTED? no ✓ *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 — 19-29 Febr. 10. 11. 17. 31 March. 17 April 1916.
- Total No. of visits 7.

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 10-3-16 Propeller 10/3/16

Stern tube 29/2/16 Steam pipes tested 28/4 Engine and boiler seatings 19/2/16 Engines holding down bolts 17-31/3/16

Completion of pumping arrangements 11/5 Boilers fixed 17/4/16 Engines tried under steam 15/5. 16

Completion of fitting sea connections 10/3/16 Stern tube 10/3/16 Screw shaft and propeller 10/3/16

Main boiler safety valves adjusted 11/5 Thickness of adjusting washers Port boiler No 1. 7 m/m; No 2. 9.5 m/m No 3. 9 m/m No 4 8.5 m/m

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 Steel Test pressure both.

Is an installation fitted for burning oil fuel No ✓ 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 No. If so, state name of vessel ___

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines and boilers of this vessel have been shipped and fitted in pla-.ce at the Builders & found in Correct position and shafting in true line. The sterntube although screwed in with great power and strongly hardened up, was found to be leaky upon testing the afterpeak tank. In order not to delay the launching of the vessel a recommendation has been made to draw the sterntube & to make same properly watertight at the Engine makers where the vessel has since been towed to in order to complete the machinery & boilers, auxilliaries & pumping arrangements.

Seaconnections fitted in an Efficient manner.

The Rotterdam District Surveyors have been advised by letter of the 19 April 1916. and Rotterdam report No 9987 with approved plans of boilers, pumping arran-gement & crankshaft forwarded with your letter of the 22nd of March 1916 are herewith returned to London Office

The amount of Entry Fee ...	£ : :	When applied for,	
Special	£ 80. – :	19	
Donkey Boiler Fee ...	£ : :	When received,	
Travelling Expenses (if any)	£ 21. – :	19	

Certificate (if required) to be sent to

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

[signature] T. N. Bennoli
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. JUN. -2. 1916

Assigned See minute Rot. fo. 10070