

# REPORT ON MACHINERY.

Received at London Office TUE. MAY. 18. 1915

Date of writing Report 11 May 1915 When handed in at Local Office 19 Port of Rotterdam  
 No. in Survey held at Rotterdam Date, First Survey 23 September Last Survey 11 May 1915  
 Reg. Book. on the Steel Dutch Steam Steamer "Guasteland" (Number of Visits 27) Gross 1091.04 Tons Net 1124.60  
 Master J. Krop Built at Rotterdam By whom built W. H. Rijkse, Co. When built  
 Engines made at Rotterdam By whom made My. van Schuyk, W. H. van Tjumen when made 1915  
 Boilers made at Rotterdam By whom made My. van Schuyk, W. H. van Tjumen when made 1915  
 Registered Horse Power 2 Owners Schuyk, van Tjumen My. Port belonging to Rotterdam  
 Nom. Horse Power as per Section 28. 155 Is Refrigerating Machinery fitted for cargo purposes 2 Is Electric Light fitted 2

**ENGINES, &c.**—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 14 1/2 x 14 x 14 Length of Stroke 36 Revs. per minute 80 Dia. of Screw shaft as per rule 10 1/2 Material of Steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner Is the after end of the liner made water tight in the propeller boss 2 If the liner is in more than one length are the joints burned 2 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 2 If two liners are fitted, is the shaft lapped or protected between the liners ceder's patent Length of stern bush 43  
 Dia. of Tunnel shaft as per rule 9 1/2 Dia. of Crank shaft journals as per rule 9 1/2 Dia. of Crank pin 9 1/2 Size of Crank webs 6 1/2 Dia. of thrust shaft under collars 9 1/2 Dia. of screw 11 1/2 Pitch of Screw 14 1/4 No. of Blades 4 State whether moveable no Total surface 50 ft  
 No. of Feed pumps 2 Diameter of ditto 3 Stroke 18 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 18 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 2 Sizes of Pumps 6 x 6 x 10 & 10 x 10 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 1 in each wing 2 1/4 each in hold In Holds, &c. 1 in each wing gutter & fore hold, 1 in 1st hold, 1 in 2nd hold  
 No. of Bilge Injections 1 sizes 4 1/2 Connected to, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size 4 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 yes  
 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 steam How are they protected 2  
 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. 25/3 of Stern Tube 25/3 Screw shaft and Propeller 25/3  
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper platform

**BOILERS, &c.**—(Letter for record 2) Manufacturers of Steel Mun. Maschinen, Hütten Verein of Bochum, North Side  
 Total Heating Surface of Boilers 2420 Is Forced Draft fitted no No. and Description of Boilers 2 High Luedd main boiler  
 Working Pressure 180 lb. Tested by hydraulic pressure to 360 lb. Date of test 8-4-15 No. of Certificate 581  
 Can each boiler be worked separately yes Area of fire grate in each boiler 39 ft No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 4.64 Pressure to which they are adjusted 180 lb. Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 15 Mean dia. of boilers 12 1/2 Length 10 1/2 Material of shell plates Steel  
 Thickness 1 1/16 Range of tensile strength 28-35 ton Are the shell plates welded or flanged no Descrip. of riveting: cir. seams separ long. seams double butt rivet holes in long. seams 1 1/16 Pitch of rivets 4 1/2 Lap of plates or width of butt straps 16  
 Per centages of strength of longitudinal joint 84.5 Working pressure of shell by rules 193 lb. Size of manhole in shell 12 x 16  
 Size of compensating ring 9 x 1 1/4 No. and Description of Furnaces in each boiler 2 minimum Material Steel Outside diameter 3 10 1/16  
 Length of plain part top 2 Thickness of plates erown 9 1/16 Description of longitudinal joint Welded No. of strengthening rings none  
 Working pressure of furnace by the rules 185 lb. Combustion chamber plates: Material Steel Thickness: Sides 7/8 Back 7/8 Top 7/8 Bottom 1  
 Pitch of stays to ditto: Sides 4 1/8 x 4 1/4 Back 4 1/8 x 4 1/4 Top 4 1/8 x 4 1/4 If stays are fitted with nuts or riveted heads riveted Working pressure by rules 181 lb.  
 Material of stays Iron Diameter at smallest part 1 1/8 Area supported by each stay 53 Working pressure by rules 193 lb. End plates in steam space riveted  
 Material Steel Thickness 1 1/16 Pitch of stays 15 1/2 x 16 How are stays secured with nuts Working pressure by rules 199 lb. Material of stays Steel  
 Diameter at smallest part 5.05 Area supported by each stay 248 Working pressure by rules 204 lb. Material of Front plates at bottom Steel  
 Thickness 3/16 Material of Lower back plate Steel Thickness 3/16 Greatest pitch of stays 14 x 4 1/2 Working pressure of plate by rules 230 lb.  
 Diameter of tubes 3 1/2 Pitch of tubes 4 3/8 x 4 3/8 Material of tube plates Steel Thickness: Front 13/16 Back 13/16 Mean pitch of stays 8 1/4 x 15 1/8  
 Pitch across wide water spaces 14 x 8 1/4 Working pressures by rules 254 lb. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 x 2 x 1/4 Length as per rule 2 5/16 Distance apart 4 3/4 Number and pitch of stays in each 2 of 4 1/2  
 Working pressure by rules 193 lb. Superheater or Steam chest; how connected to boiler 2 Can the superheater be shut off and the boiler worked separately 2 Diameter 2 Length 2 Thickness of shell plates 2 Material 2 Description of longitudinal joint 2 Diam. of rivet holes 2 Pitch of rivets 2 Working pressure of shell by rules 2 Diameter of flue 2 Material of flue plates 2 Thickness 2  
 If stiffened with rings 2 Distance between rings 2 Working pressure by rules 2 End plates: Thickness 2 How stayed 2  
 Working pressure of end plates 2 Area of safety valves to superheater 2 Are they fitted with easing gear 2

If not, state whether, and when, one will be sent. Is a Report also sent on the Hull of the ship?

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:—

*1 quantity with top end bolts, nuts; 2 bottom end bolts, nuts; 2 main bearing bolts, nuts; 1 set of coupling bolts; 1 set of feed, bilge, circulating, air pump valves, guards; 2 quantities of assorted bolts, nuts; 1 pair of eccentric pins; 1 spoke propeller shaft; 1 propeller; 1 set of bottom and top end bearings; 1 cedarwood piston ring; 1 set of journaling bolts; 1 valve spindle; 1 eccentric rod; 1 set of circulating pump rod; 15 condenser tubes; 50 ferrules; 1 bilge pump gear; 1 set of fin bars; 1 set of chest valves; 1 set of piston springs.*

The foregoing is a correct description,  
Maatschappij voor Scheeps- en Werktuigbouw

"FIJNOORD"

*W. H. H. H. H.*

Manufacturer.

Dates of Survey while building: During progress of work in shops - *Sept 22, 28, 30, Oct 1, 11, 14, 22, 29, Nov 3, 11, Dec 17, Jan 14, Feb 2, 22.*  
During erection on board vessel - *March 11, March 25, April 3, 17, 18.*  
Total No. of visits *24*

Is the approved plan of main boiler forwarded herewith? *Yes ✓*

*Also shafts, pumps, arrangement plan, donkey*

Dates of Examination of principal parts—Cylinders  $\frac{3}{16}$  -  $\frac{1}{2}$  Slides  $\frac{3}{16}$  -  $\frac{1}{2}$  Covers  $\frac{1}{16}$  Pistons  $\frac{1}{16}$  -  $\frac{1}{2}$  Rods  $\frac{3}{16}$  -  $\frac{1}{2}$   
Connecting rods  $\frac{3}{16}$  -  $\frac{1}{2}$  Crank shaft  $\frac{3}{16}$  -  $\frac{1}{2}$  Thrust shaft  $\frac{3}{16}$  -  $\frac{1}{2}$  Tunnel shafts  $\frac{3}{16}$  -  $\frac{1}{2}$  Screw shaft  $\frac{3}{16}$  -  $\frac{1}{2}$  Propeller  $\frac{1}{2}$   
Stern tube  $\frac{1}{16}$  -  $\frac{1}{2}$  Steam pipes tested  $\frac{1}{4}$  -  $\frac{3}{4}$  Engine and boiler seatings  $\frac{1}{4}$  Engines holding down bolts  $\frac{1}{4}$   
Completion of pumping arrangements  $\frac{1}{2}$  Boilers fixed  $\frac{1}{4}$  Engines tried under steam  $\frac{1}{5}$   
Main boiler safety valves adjusted  $\frac{1}{5}$  Thickness of adjusting washers *Steel wire 14 to 18 of the Patent wire  $\frac{1}{16}$  to  $\frac{1}{8}$  inch*  
Material of Crank shaft *Steel* Identification Mark on *Do. 441, 5, 15.* Material of Thrust shaft *Steel* Identification Mark on *Do. 442, 3, 15.*  
Material of Tunnel shafts *Steel* Identification Marks on *Do. 443, 2, 15.* Material of Screw shafts *Steel* Identification Marks on *Do. 444, 2, 15.*  
Material of Steam Pipes *Steel ✓* Test pressure *540 lb. ✓*

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.)

*The machinery and boiler, having been fitted to accordance with the approved plan and the Secretary's letter, material tested as required, workmanship good, and the machinery having worked satisfactorily under steam I am of opinion that the vessel is eligible to be recorded in the Registry's Register book with T. L. M. C. 5. 15.*

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 5. 15.

*J.W.D.*  
19/5/15

*J. R. B. B. B.*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee ... *f 24. -*  
Special ... *f 249. -*  
Donkey Boiler Fee ... *f 14. -*  
Travelling Expenses (if any) ... *f 14. -*

Committee's Minute *FRI. MAY. 21. 1915*

Assigned *+ LMC 5-15*

Certificate (if required) to be sent to the Surveyor



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