

REPORT ON MACHINERY

No. 1285.6
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Port of Amsterdam

No. in Survey held at Amsterdam
Reg. Book.

Date, First Survey 9 August 1915. Last Survey 3 March 1917.

32 in. Class the steel screw steamer *Tjisalah*

(Number of Visits 54.

Master *N. W. la Rooy* Built at *Amsterdam* By whom built *Med Scheepbouw Maat* When built 1914.

Engines made at *Amsterdam* By whom made *Werkspoor* when made 1914.

Boilers made at *Amsterdam* By whom made *Werkspoor* when made 1914.

Registered Horse Power 536. Owners *Java China Japan Lijn* Port belonging to *Batavia*

Nom. Horse Power as per Section 28 536. Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *Three* No. of Cranks *Three*

Dia. of Cylinders *27 1/16 x 45 1/4 x 74* Length of Stroke *51 1/16* Revs. per minute *42* Dia. of Screw shaft as per rule *16 1/4* Material of *S.M. ANNEALED*
as fitted *14 1/4* screw shaft *W.G. STEEL*

Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no* 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 *no* 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 *no* If two liners are fitted, is the shaft lapped or protected between the liners *Cedwalls put fitted* Length of stern bush *5' 10"*

Dia. of Tunnel shaft as per rule *13 3/16* Dia. of Crank shaft journals as per rule *14 1/16* Dia. of Crank pin *14 1/16* Size of Crank webs *9 1/2* Dia. of thrust shaft under collars *14 1/16* Dia. of screw *19 1/8* Pitch of Screw *17 to 19 1/8* No. of Blades *four* State whether moceable *yes* Total surface *98 deg ft*

No. of Feed pumps *two* Diameter of ditto *4 1/16* Stroke *23 5/8* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *two* Diameter of ditto *4 1/16* Stroke *23 5/8* Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *three* Sizes of Pumps *two duplex 8 x 10 1/2 x 21* No. and size of Suctions connected to both Bilge and Donkey pumps *one 5 x 4 x 12*

In Engine Room *two 2 1/4, two 2, four 3 1/2 int diam* In Holds, &c. *two 2 1/4 and fourteen 3 1/2 int diam*

No. of Bilge Injections *one* sizes *10"* Connected to *condensers* to circulating pump *yes* Is a separate Donkey Suction fitted in Engine room & size *yes 3 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 *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 *Suctions of forebody* How are they protected *iron casings*

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 *upper deck platform*

BOILERS, &c.—(Letter for record *R*) Manufacturers of Steel *Krupp and Leeds Forge*

Total Heating Surface of Boilers *7841 sq ft* Forced Draft fitted *yes* No. and Description of Boilers *three Single Ended*

Working Pressure *12.65 kg* Tested by hydraulic pressure to *360 lbs* Date of test *4-1-16* No. of Certificate *213-214-215*

Can each boiler be worked separately *yes* Area of fire grate in each boiler *5.46 m²* No. and Description of Safety Valves to each boiler *two direct spring* Area of each valve *6.31 cm²* Pressure to which they are adjusted *180 lbs* Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *shipside to side* Mean dia. of boilers *4650 mm* Length *3570 mm* Material of shell plates *steel*

Thickness *37* Range of tensile strength *28 to 32 ton* Are the shell plates welded or flanged *plain* Descrip. of riveting: cir. seams *double riv*

long. seams *double strap* Diameter of rivet holes in long. seams *37 mm* Pitch of rivets *246 mm* Lap of plates or width of butt straps *514 mm*

Per centages of strength of longitudinal joint rivets *84.5* Working pressure of shell by rules *15.3 kg* Size of manhole in shell *325 x 425 mm*

Size of compensating ring *210 x 32 mm* No. and Description of Furnaces in each boiler *3 Morrison Impulse* Material *steel* Outside diameter *1270 mm*

Length of plain part top *1314 mm* Thickness of plates crown *16 mm* Description of longitudinal joint *welded* No. of strengthening rings *no*

Working pressure of furnace by the rules *14.3 kg* Combustion chamber plates: Material *steel* Thickness: Sides *17 mm* Back *18 mm* Top *17 mm* Bottom *25 mm*

Pitch of stays to ditto: Sides *195 x 180* Back *193 x 209* Top *186 x 225* If stays are fitted with nuts or riveted heads *riveted heads* Working pressure by rules *14.4 kg*

Material of stays *iron* Area at smallest part *1154.5 cm²* Area supported by each stay *209 x 195* Working pressure by rules *15.3 kg* End plates in steam space: Material *steel* Thickness *28 mm* Pitch of stay *450 x 480 mm* How are stays secured *screwed with riv washers* Working pressure by rules *13.36 kg* Material of stays *steel*

Area at smallest part *4454 cm²* Area supported by each stay *2160 cm²* Working pressure by rules *15 kg* Material of Front plates at bottom *steel*

Thickness *24 mm* Material of Lower back plate *steel* Thickness *25 mm* Greatest pitch of stays *209 x 300 mm* Working pressure of plate by rules *13.8 kg*

Diameter of tubes *70 mm* Pitch of tubes *95 x 101 mm* Material of tube plates *steel* Thickness: Front *24 mm* Back *22 mm* Mean pitch of stays *204 x 185 mm*

Pitch across wide water spaces *365 mm* Working pressures by rules *13.6-19.8-21.1 kg* Girders to Chamber tops: Material *steel* Depth and thickness of girder at centre *240 x 44 mm* Length as per rule *940 mm* Distance apart *225 mm* Number and pitch of stays in each *four 180 mm*

Working pressure by rules *12.8 kg* Steam dome: description of joint to shell *no* % of strength of joint *no*

Diameter *no* Thickness of shell plates *no* Material *no* Description of longitudinal joint *no* Diam. of rivet holes *no*

Pitch of rivets *no* Working pressure of shell by rules *no* Crown plates *no* Thickness *no* How stayed *no*

SUPERHEATER. Type *no* Date of Approval of Plan *no* Tested by Hydraulic Pressure to *no*

Date of Test *no* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *no*

Material of Safety Valve *no* Pressure to which each is adjusted *no* Is Easing Gear fitted *no*

W265-0136



