

REPORT ON MACHINERY.

No. 6748

Received at London Office JUL 28 1910

MON. 28 NOV 1910

Date of writing Report 21 July 1910 When handed in at Local Office

Port of Rotterdam

No. in Survey held at
Reg. Book.

Date, First Survey 27 Nov 09 Last Survey 24 June 1910

on the Steel S.S. "Gitarvem"

(Number of Visits 10)

Gross Tons

Net Tons

Master

Built at Amsterdam

By whom built Ned. Scheepbouw Maats.

When built 1910

Engines made at

Flushing

By whom made

Koninklijke Maatschappij

when made

1910

Boilers made at

Flushing

By whom made

de Schelde

when made

1910

Registered Horse Power

Owners Java-China-Japan Lm

Port belonging to Batavia

Nom. Horse Power as per Section 28

545

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Inverted Triple

No. of Cylinders Three

No. of Cranks 3

Dia. of Cylinders 28 1/2", 47" & 77" Length of Stroke 48" Revs. per minute

Dia. of Screw shaft

as per rule 16 1/4"

Material of screw shaft steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners Is the after end of the liner made water tight in the propeller boss

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 65"

Dia. of Tunnel shaft as per rule 14 1/4" approved as per rule 14 3/4" Dia. of Crank shaft journals as per rule 14 3/4" Dia. of Crank pin 15" Size of Crank webs 10 x 6 1/4" Dia. of thrust shaft under collars 14 3/4" Dia. of screw 19 1/8" Pitch of Screw 18'-6" No. of Blades 4 State whether moveable 4 Total surface 106.839 sq. ft.

No. of Feed pumps 2 Diameter of ditto 3 3/4" Stroke 25" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 25" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 F 1 Bellas Sizes of Pumps 10 1/2 x 8 x 21. 7 x 4 x 6. 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

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

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 of Stern Tube Screw shaft and Propeller

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

BOILERS, &c.—(Letter for record 7830) Manufacturers of Steel David Colville & Sons, Leeds Forge Co. Ltd.

Total Heating Surface of Boilers 7830 sq. ft. Is Forced Draft fitted yes No. and Description of Boilers 3 single ended marine

Working Pressure 180 lbs Tested by hydraulic pressure to 270 lbs Date of test 10 June 10 No. of Certificate 283

Can each boiler be worked separately Area of fire grate in each boiler 60.539 sq. ft. No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 9.62 sq. in. 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 14'-10 1/2" Length 11'-7 1/2" Material of shell plates steel

Thickness 1 1/2" Range of tensile strength 26.7-30.5 T Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Lap. 2 x riv

long. seams all butt 5 x riv Diameter of rivet holes in long. seams 19/16" Pitch of rivets 10 3/8" Lap of plates or width of butt straps 23 7/8"

Per centages of strength of longitudinal joint rivets 92. Working pressure of shell by rules 188 lbs Size of manhole in shell none

Size of compensating ring No. and Description of Furnaces in each boiler 3 susp. bull Material steel Outside diameter 45 1/2"

Length of plain part top Thickness of plates crown 5/8" Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 182 lbs Combustion chamber plates: Material steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1"

Pitch of stays to ditto: Sides 7 x 8" Back 7 3/4 x 8" Top 7 x 8" If stays are fitted with nuts or riveted heads riveted Working pressure by rules 192 End plates in steam space:

Material of stays Iron Diameter at smallest part 1.76" Area supported by each stay 62 sq. in. Working pressure by rules 320 lbs Material of stays steel

Material steel Thickness 7/8" Pitch of stays 15" x 16" How are stays secured riveted Working pressure of Front plates at bottom steel

Diameter at smallest part 5.41" Area supported by each stay 240.5 Working pressure by rules 221 Material of Front plates at bottom steel

Thickness 1 5/16" Material of Lower back plate steel Thickness 29/32" Greatest pitch of stays 13" x 7 3/4" Working pressure of plate by rules 234

Diameter of tubes 2 3/4" Pitch of tubes 3 1/6" x 3 7/8" Material of tube plates steel Thickness: Front 1 5/16" Back 7/8" Mean pitch of stays 7 3/4" x 11 7/8"

Pitch across wide water spaces 14 1/2" Working pressures by rules 198 lbs Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 9 1/4" x 2" Length as per rule 36" Distance apart 8" Number and pitch of stays in each 4-7"

Working pressure by rules 208 lbs 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

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. *ne.*

Description

Made at

By whom made

When made

Where fixed

Working pressure

tested by hydraulic pressure to

Date of test

No. of Certificate

Fire grate area

Description of Safety

Valves

No. of Safety Valves

Area of each

Pressure to which they are adjusted

Date of adjustment

If fitted with easing gear

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

Rivets
Plates

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

Stayed by

Diameter of uptake

Thickness of uptake plates

Thickness of water tubes

Dates of survey

SPARE GEAR. State the articles supplied:— 2 bolts & nuts for connecting rod top and 2 for bottom ends; 2 main bearing bolts & nuts; 1 set of coupling bolts; 1 set of feed & bilge pump valves; 1 set of springs for each piston; 2 quantities of assorted bolts & nuts; Iron of various sizes. 2 propeller blades & 4 studs & nuts; 1/3 crankshaft; 1 stern shaft complete; 1 propeller boss; 12 pinning bolts & brass nuts; 1 piston rod complete; 1 guide block; 1 H. F. valve with springs and chamber liners; 1 L. F. valve face & screws; 1 interchangeable valve spindle; 1 link block & liners complete; 1 set of main bearings & 1 of crankpin bearings with liners complete; 1 double set of crosshead bearings with liners; 2 1/2 inch metal studs & nuts for stern tube gland; 1 set of thrushes; 1 eccentric sheave & strap of each size; 1 eccentric rod & bolts; 2 sets of air pump lever frames & 2 for crosshead ends; 1 air pump rod complete; 1 air pump head valve & grating; 1 bucket ring; and an ample supply of spare gear for auxiliary engines. 2 safety valve springs; 30 boiler tubes; 2 stay tubes.

The foregoing is a correct description,

The foregoiing is a correct description, *1 eccentric rod & bolts; 2 sets of air pump lever frames & 2 for crosshead ends; 1 air pump rod complete; 1 air pump head valve & grating; 1 bucket ring; and an ample supply of spare gear for auxiliary engines. 2 safety valve springs; 30 boiler tubes; 2 stay tubes.*
 Manufacturer.

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - -

27 Nov; 22 Dec 09; 20 Jan; 1 Feb; 3 & 10 March; 13 & 29 April; 10 & 24 June 1910

10

Total No. of visits

Is the approved plan of main boiler forwarded herewith *yes.*

After C. P. part } *shafting*
 " " " *donkey* " " *yes.*

Dates of Examination of principal parts—Cylinders 20/1-29/4 Slides 22/12-13/4 Covers 22/12-10/3 Pistons 22/12-29/4 Rods 10-29/6

Connecting rods *made* Crank shaft *in* Thrust shaft *Ger* Tunnel shafts *ma* Screw shaft *ny.* Propeller 29/4

Stern tube 22/12-24/6 Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts ✓

Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam ✓

Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓ *spare K.H. 5440*

Material of Crank shaft *Steel* Identification Mark on Do. *PA. 3426* Material of Thrust shaft *steel* Identification Mark on Do. *J.M. 6406*
J.M. 6489, 6499; 6500

Material of Tunnel shafts *steel* Identification Marks on Do. *HK 1790* Material of Screw shafts *steel* Identification Marks on Do. *AK 1789*
1791 & 1792

Material of Steam Pipes ✓ Test pressure ✓

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

Engines & boilers completed for shipment to Amsterdam where machinery will be fitted on board.

The machinery and boilers having been built in accordance with the approved plans & the Secretary's letters, materials tested and workmanship good, I am of opinion that this vessel will be eligible to be recorded in the Society's Register Book with "I. M. C." and date when the remainder of the requirements have been carried out and reported upon by the Society's Surveyor at Amsterdam.

For endorsement see Amsterdam Rpt. 14694.

The amount of Entry Fee.. *£ 36.* : When applied for.

2/3 Special .. *£ 578.* : *23/7* 19*10*

Donkey Boiler Fee .. *£* : When received,

Travelling Expenses (if any) *£ 88.25* : *27/7* 19*10*

Committee's Minute

Assigned

TUE. 29 NOV 1910

+ L.M.C. 11.10

MACHINERY CERTIFICATE

WRITTEN in duplicate

N. F. D. van Ollfen

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

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