

REPORT ON MACHINERY.

No. 11692
IUE. MAR. 29 1921

Date of writing Report 21 Aug 1921 When handed in at Local Office

Port of Rotterdam

No. in Survey held at Papendrecht
Reg. Book.

Date, First Survey 26 Jan

Last Survey 8 March 1921

on the *Paulsen Steamer* "MILLEWA" ex KAMPEN

(Number of Visits)

Gross 1407.79
Net 804.86
When built 1921Master ? Built at *Kinderdijk* By whom built *Gebr. Jansen*Engines made at *Albion* By whom made *Albion* when made 1921Boilers made at *ditto* By whom made *ditto* when made 1921Registered Horse Power Owners *Nobels Industrie Co* Port belonging to *Glasgow*Nom. Horse Power as per Section 28 174 Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*ENGINES, &c.—Description of Engines *Vertical Triple Expansion* No. of Cylinders 3 No. of Cranks 3Dia. of Cylinders *17 1/2 x 29 1/8 x 46 1/8* Length of Stroke 36 Revs. per minute 85 Dia. of Screw shaft *10 1/8* as per rule *10 1/8* Material of screw shaft *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 *yes* 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 *yes* Length of stern bush 7'-3"Dia. of Tunnel shaft *9 1/8* as per rule *9 1/8* Dia. of Crank shaft journals *9 5/8* as per rule *9 5/8* Dia. of Crank pin *9 7/8* Size of Crank webs *6 1/2 x 8 1/4* Dia. of thrust shaft under collars *9 7/8* Dia. of screw *12 1/8* Pitch of Screw *15'-0"* No. of Blades 4 State whether moveable *no* Total surface *54 sq'*No. of Feed pumps 2 Diameter of ditto *3 1/4* Stroke 10" Can one be overhauled while the other is at work *yes*No. of Bilge pumps 2 Diameter of ditto *4 5/16* Stroke 10" Can one be overhauled while the other is at work *yes*No. of Donkey Engines 2 Sizes of Pumps *8 x 8 x 10* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *2 x 2 1/2* in Tunnel *1 x 2 1/2* in D. Pump *1 x 2 1/2* In Holds, &c. *I 2 x 2 3/4 II 2 x 2 1/2*No. of Bilge Injections 1 sizes 4" Connected to condenser or to circulating pump *yes* Is a separate Donkey Suction fitted in Engine room & size *2 x 2 3/4*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 *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 *none* How are they protected *yes*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 *BR top platform*BOILERS, &c.—(Letter for record *15*) Manufacturers of Steel *Gibson & Co. Glasgow*Total Heating Surface of Boilers *3163 sq'* Is Forced Draft fitted *no* No. and Description of Boilers *2 SE multitubular*Working Pressure *100 lb* Tested by hydraulic pressure to *220 lb* Date of test *26-1-21* No. of Certificate *1*Can each boiler be worked separately *yes* Area of fire grate in each boiler *44.5 sq'* No. and Description of Safety Valves to each boiler *2 Spring loaded* Area of each valve *4.43 sq'* Pressure to which they are adjusted *100 lb* Are they fitted with easing gear *yes*Smallest distance between boilers or uptakes and bunkers or woodwork *12"* Mean dia. of boilers *12'-5 1/8"* Length *10'-5 1/4"* Material of shell plates *steel*Thickness *1/8"* Range of tensile strength *20,720* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *D lap*long. seams *Thick D B* Diameter of rivet holes in long. seams *1 1/4"* Pitch of rivets *8 3/8"* Lap of plates or width of butt straps *19 3/4"*Per centages of strength of longitudinal joint rivets *95* Working pressure of shell by rules *199 lb* Size of manhole in shell *12 x 16"*Size of compensating ring *26 1/4 x 1/8"* No. and Description of Furnaces in each boiler *2 Horizontal* Material *steel* Outside diameter *49 1/4"*Length of plain part *top 1/2 bottom 1/2* Thickness of plates *crown 5/8 bottom 5/8* Description of longitudinal joint *Welded* No. of strengthening rings *1*Working pressure of furnace by the rules *204* Combustion chamber plates: Material *steel* Thickness: Sides *5/8"* Back *7/8"* Top *5/8"* Bottom *1"*Pitch of stays to ditto: Sides *7 x 7/4"* Back *7"* Top *7 x 7/8"* If stays are fitted with nuts or riveted heads *Both* Working pressure by rules *180*Material of stays *steel* Area at smallest part *1.40 sq'* Area supported by each stay *50.2"* Working pressure by rules *276* End plates in steam space: Material *steel* Thickness *1"* Pitch of stays *16 1/2"* How are stays secured *Secured by plates* Working pressure by rules *207* Material of stays *steel*Area at smallest part *5.45* Area supported by each stay *273* Working pressure by rules *208* Material of Front plates at bottom *steel*Thickness *1"* Material of Lower back plate *steel* Thickness *1"* Greatest pitch of stays *14 1/8"* Working pressure of plate by rules *200*Diameter of tubes *3 1/4"* Pitch of tubes *4 5/8"* Material of tube plates *steel* Thickness: Front *1"* Back *7/8"* Mean pitch of stays *8 5/8"*Pitch across wide water spaces *14 1/2"* Working pressures by rules *300* Girders to Chamber tops: Material *steel* Depth and thickness of girder at centre *7 7/8 x 7 1/8"* Length as per rule *29"* Distance apart *7 7/8"* Number and pitch of stays in each *2 x 7"*Working pressure by rules *192* Steam dome: description of joint to shell *yes* % of strength of joint *yes*Diameter *—* Thickness of shell plates *yes* Material *yes* Description of longitudinal joint *yes* Diam. of rivet holes *yes*Pitch of rivets *yes* Working pressure of shell by rules *yes* Crown plates *yes* Thickness *yes* How stayed *yes*SUPERHEATER. Type *—* Date of Approval of Plan *yes* Tested by Hydraulic Pressure to *yes*Date of Test *yes* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *yes*Diameter of Safety Valve *yes* Pressure to which each is adjusted *yes* Is Easing Gear fitted *yes*

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— 2 bottom end bolts and nuts, 2 top end bolts and nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed and bilge pump valves, 1 set of piston rings, assorted bolts and nuts, iron of various sizes, 1 propeller shaft with propeller and bedrill patent ring, 1 set of top and bottom end brasses, 1 valve spindle with eccentric sheave & strap, 1 feed and bilge pump ram, air and 1 circulating pump bucket rod, 12+4 boiler tubes, 15 condenser tubes, 50 fowls, 2 check valves, 6 pumping bolts.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- }
{ During erection on board vessel -- }
Total No. of visits 7

Is the approved plan of main boiler forwarded herewith? *Returned in London office*

Dates of Examination of principal parts—Cylinders $2\frac{1}{2}$ Slides $2\frac{1}{2}$ Covers $2\frac{1}{2}$ Pistons $2\frac{1}{2}$ Rods $2\frac{1}{2}$
Connecting rods $2\frac{1}{2}$ Crank shaft $2\frac{1}{2}$ Thrust shaft $2\frac{1}{2}$ Tunnel shafts $2\frac{1}{2}$ Screw shaft $2\frac{1}{3}$ Propeller $2\frac{1}{3}$
Stern tube $\frac{4}{3}$ Steam pipes tested $2\frac{1}{2}$ Engine and boiler seatings $2\frac{1}{2}$ Engines holding down bolts $2\frac{1}{2}$
Completion of pumping arrangements $4-\frac{7}{3}$ Boilers fixed \checkmark Engines tried under steam $2\frac{1}{2}$
Completion of fitting sea connections $\frac{7}{3}$ Stern tube $\frac{2}{3}$ Screw shaft and propeller $\frac{2}{3}$
Main boiler safety valves adjusted $\frac{7}{3}$ Thickness of adjusting washers $SB \frac{3}{4} - \frac{1}{16}$ Port $\frac{9}{32} - \frac{3}{4}$
Material of Crank shaft *See* Identification Mark on Do. *N.V. mark* Material of Thrust shaft *See* Identification Mark on Do. *N.V.*
Material of Tunnel shafts *See* Identification Marks on Do. *Krupp* Material of Screw shafts *See* Identification Marks on Do. *Krupp*
Material of Steam Pipes *See* Test pressure 540 lbs

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 machinery has been built and fitted under the supervision of the Master. Veritas Surveyors carefully examined as per instructions by Secretary's letter and found in accordance with the approved plans. The machinery has been found working satisfactorily during a trial and may in my opinion be recorded in the Society's Register Book with LMC 3-21.*

It is submitted that
this vessel is eligible for
THE RECORD. LMC. 3.21

Belm APR

The amount of money charged { See London } When applied for, $26/3$ 19 20.
Donkey Boiler Fee ... : : :
Travelling Expenses (if any) 40.00 : : :
When received, $30/3$ 21

A. Biggs
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 8 APR. 1921*

Assigned *L.M.C. 3.21*

FRI. 11 NOV. 1921

FRI. MAY. 19 1922

FRI. JUN. 30 1922

CERTIFICATE WRITTEN



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Foundation