

REPORT ON MACHINERY.

No. 11690

JUL MAR 29 1921

Date of writing Report 18 May 1921 When handed in at Local Office 10 Port of Rotterdam

No. in Survey held at Rotterdam Date, First Survey 15 April 20 Last Survey 7 March 1921

Reg. Book. on the Steel Screw Steamer "ARGO" (Number of Visits 24)

Master J. P. Johansen Built at Rotterdam By whom built Maschinenfabrik - Rheinfelden

Engines made at Rotterdam By whom made ditto van P. Smits Jr when made 1921

Boilers made at ditto By whom made ditto when made 1921

Registered Horse Power 212 Owners Finck & Ingfaerby A. Bolger Port belonging to Helsingfors.

Nom. Horse Power as per Section 28 212 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 3

Dia. of Cylinders 20 3/4 x 32 1/4 x 55 Length of Stroke 39 3/8 Revs. per minute 75 Dia. of Screw shaft as per rule 12 5/8 Material of screw shaft Sell

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 yes

If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 4'-1"

Dia. of Tunnel shaft as per rule 10 3/8 Dia. of Crank shaft journals as per rule 10 9/16 Dia. of Crank pin 11 Size of Crank webs 9 1/2 x 7 1/4 Dia. of thrust shaft under collars 11 Dia. of screw 13 1/2 Pitch of Screw 16'-9" No. of Blades 4 State whether moceable no Total surface 64.5 sq

No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 19 1/16 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 19 1/16 Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 7 1/2 x 5 x 10, 7 1/2 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 8 x 2 3/8 in Tunnel 1 x 2 1/4 x 2 3/4 x 4 In Holds, &c. N I 5 x 2 3/8 in II 5 x 2 3/8

No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size yes 2 x 2 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 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 ER top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Haumann & Pohlwerke

Total Heating Surface of Boilers 3341 sq Is Forced Draft fitted no No. and Description of Boilers 2 S Enmultitubular

Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 20-7-20 No. of Certificate 703

Can each boiler be worked separately yes Area of fire grate in each boiler 60 sq - 36.6 sq No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 7, 80" 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 24" Mean dia. of boilers 14'-5 1/4 Length 10'-10" Material of shell plates Sell

Thickness 1/4" Range of tensile strength 28, 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D lap

long. seams Tube DB Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 8 7/8" Lap of plates or width of butt straps 20 1/16

Per centages of strength of longitudinal joint rivets 80% plate 85% Working pressure of shell by rules 190 Size of manhole in shell 12 x 16"

Size of compensating ring 29 1/2 x 1/4 No. and Description of Furnaces in each boiler 3 Horizontal Material Sell Outside diameter 47 1/4"

Length of plain part top bottom Thickness of plates crown bottom 2 1/2 3/2 Description of longitudinal joint Welded No. of strengthening rings 1

Working pressure of furnace by the rules 220 Combustion chamber plates: Material Sell Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 7/8"

Pitch of stays to ditto: Sides 6 7/8 x 7/8 Back 6 3/4 x 6 3/8 Top 6 7/8 x 7/8 stays are fitted with nuts or riveted heads Riveted and Working pressure by rules 219.

Material of stays Sell Area at smallest part 1,760 Area supported by each stay 45,550 Working pressure by rules 209 End plates in steam space:

Material Sell Thickness 13/16" Pitch of stays 17 x 15 1/4 How are stays secured Double Working pressure by rules 227 Material of stays Sell

Area at smallest part 5,94 Area supported by each stay 26,70 Working pressure by rules 237 Material of Front plates at bottom Sell

Thickness 13/16" Material of Lower back plate Sell Thickness 13/16 Greatest pitch of stays 13 3/8 Working pressure of plate by rules 211

Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 Material of tube plates Sell Thickness: Front 29/32" Back 29/32" Mean pitch of stays 9"

Pitch across wide water spaces 14 3/8 Working pressures by rules 330 Girders to Chamber tops: Material Sell Depth and thickness of girder at centre 2 x 11/16 x 8 1/2 Length as per rule 20 Distance apart 7 7/8 Number and pitch of stays in each 3 x 6 7/8

Working pressure by rules 194 Steam dome: description of joint to shell none % of strength of joint 100

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 Small Date of Approval of Plan Tested by Hydraulic Pressure to 660 lbs

Date of Test 22. 5. 1920 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes

Diameter of Safety Valve 2" Pressure to which each is adjusted 100 lbs. 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 top end bolts and nuts, 2 bottom end bolts and nuts, 2 main bearing bolts, one set of coupling bolts, 1 set of piston rings, 1 set of helge pump valves, 1 set of feed pump valves, assorted bolts and nut iron of various sizes, 1 set of hupend brass, 1 propeller 12 condenser tubes, 12 boiler tubes.

The foregoing is a correct description,
MACHINEFABRIEK & SCHEEPSWERF

van P. SMIT Jr.

P. H. J. van der Meer

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 15/4, 20-29/4, 2/5, 10-23/6, 20/7, 13-29/8, 15/9-23/9, 1920
During erection on board vessel --- 1-7-27/12, 30/12, 3-29/1, 7-8, 21-28/2, 3-5-7/3, 1921
Total No. of visits 24

Is the approved plan of main boiler forwarded herewith *Yes*
" " " donkey " " *Yes*

Dates of Examination of principal parts—Cylinders 2/5 Slides 2/5 Covers 2/5 Pistons 29/4 Rods 29/4
Connecting rods 20/8 Crank shaft 13/8 Thrust shaft 13/8 Tunnel shafts 13/8 Screw shaft 13/8 Propeller 23/10
Stern tube 23/10 Steam pipes tested 20/12 Engine and boiler seatings 7/12 Engines holding down bolts 20/12
Completion of pumping arrangements 29/1-1921 Boilers fixed 27/12 Engines tried under steam 20/2-1921
Completion of fitting sea connections 7/12 Stern tube 1/12 Screw shaft and propeller 7/12
Main boiler safety valves adjusted 20/2 Thickness of adjusting washers SB 3/8" - 7/8" Port 7/8" - 1/2"
Material of Crank shaft *Steel* Identification Mark on Do. 9081AF Material of Thrust shaft *Steel* Identification Mark on Do. 9079
Material of Tunnel shafts *Steel* Identification Marks on Do. 649 AB Material of Screw shafts *Steel* Identification Marks on Do. 9096
Material of Steam Pipes *Steel* Test pressure 600 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 made and fitted in accordance with the approved plans, Society's Rules and Secretary's letter. Material tested as required and workmanship good. The engines have been running satisfactorily during a trial and may in my opinion be recorded in the Society's Register Book with + L.M.C. 3.21. This vessel has two main boilers of different sizes viz 2076 and 1265 #.*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 3.21.

Roll
5/4/21 *J.P.R.*

The amount of Entry Fee ... £ 48.00
Special ... £ 63.6.00
Donkey Boiler Fee ... £
Travelling Expenses (if any) £ 36.50
When applied for, 19/3 1921
When received, 23/3 1921

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

Committee's Minute TUE. 5 APR. 1921

Assigned + L.M.C. 3.21

CERTIFICATE WRITTEN



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Certificate (if required) to be sent to *Surveyor* *Gutterdam*
The Surveyors are requested not to write on or below the space for Committee's Minute.