

Rpt. 4.

REPORT ON MACHINERY.

No. 971

WED. JUL 23 1920

Received at London Office

Date of writing Report June 30th 1920 When handed in at Local Office June 30th 1920 Port of Seattle Wash. U.S.A.

No. in Survey held at Seattle W. Date, First Survey April 12th 1920 Last Survey June 21st 1920
Reg. Book. 1917 on the Wood T.S. Steamship "AGYLLA" (Number of Visits 9) Tons Gross 3160
Master Chris Lorentzen Built at Oslo Norway By whom built Grav Nansen Ship Co. When built 1919-67

Engines made at Oslo Nor. By whom made General Ordnance Co. when made 1918
Boilers made at Oslo Nor. By whom made Heine Safety Boiler Co. when made 1918

Registered Horse Power 1520 IHP Owners National Oil Transport Co. of Minn. Port belonging to Seattle W.
Nom. Horse Power as per Section 28 324 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

NGINES, &c.—Description of Engines 2 H.P. Inward Table Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 15 1/2 x 26 x 44 Length of Stroke 26 Revs. per minute 140 Dia. of Screw shaft 8 1/4 as per rule 8 1/4 Material of Steel
Is the screw shaft fitted with a continuous liner, the whole length of the stern tube Yes Is the after end of the liner made water tight 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 as per rule 8-6
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive as fitted 8 1/4 If two
liners are fitted, is the shaft lapped or protected between the liners Yes Lapped & painted Length of stern bush 2'-10"

Dia. of Tunnel shaft 7.702 as per rule 8 1/4 Dia. of Crank shaft journals 8 1/4 as per rule 8 1/4 Dia. of Crank pin 8 1/2 Size of Crank webs 16 1/2 x 6 Dia. of thrust shaft under
collars 8 1/2 Dia. of screw 9'-6" Pitch of Screw 10ft-0ins No. of Blades 3 State whether moveable No Total surface 25 sq (each)

No. of Feed pumps 2 Diameter of ditto 10 x 6 Stroke 12 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 3 Diameter of ditto 10 x 6 Stroke 12 Can one be overhauled while the others are at work Yes

No. of Donkey Engines 10 Sizes of Pumps 10 x 8 x 12, 10 x 6 x 12, 10 x 4 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2 H.P. @ 3", 2 L.P. @ 3", 2 H.P. @ 4" In Holds, &c. After Head 2 @ 2 1/2", Shaft Alley 1 @ 3"
Fore Head 2 @ 3", 1 High at 3" and 2 Low at 3 1/2", Fore Peak 1 at 3"

No. of Bilge Injections 1 sizes Yes Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3"
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 Valves
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 No

What pipes are carried through the bunkers Steam & Exhaust from Turbine How are they protected Bored in
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 Engine Room
BOILERS, &c.—(Letter for record S) Manufacturers of Steel Lukens Steel Co. Cantonide Pa.

Total Heating Surface of Boilers 5346 Is Forced Draft fitted No No. and Description of Boilers 2 Main Heine Water Tube
Working Pressure 190 lbs Tested by hydraulic pressure to 380 lbs Date of test 11-6-20 No. of Certificate 270

Can each boiler be worked separately Yes Area of fire grate in each boiler 60 sq ft No. and Description of Safety Valves to
each boiler Double Action Pet Area of each valve 9.6 sq ft Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 3'-6 1/2" Length 8'-4 1/2" Material of shell plates Steel
Thickness 3/4" Range of tensile strength 60,000 psi Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Single
long. seams DR. DBS Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 2 1/2 x 14 3/4" Lap of plates or width of butt straps 2 x 17" Out 15"

Per centages of strength of longitudinal joint 8.0 Working pressure of shell by rules 230 lbs Size of manhole in shell 11" x 15"
Size of compensating ring Flanged No. and Description of Furnaces in each boiler Yes Material Yes Outside diameter Yes

Length of plain part Front Thickness of plates Water Tank Description of longitudinal joint Front No. of strengthening rings 17 1/2
Working pressure of furnace by the rules 267 Conduction chamber plates: Material Steel Thickness: Sides 1 1/2" and Back 1 1/2" Top and Bottom 1 1/2"

Pitch of stays to ditto: Sides and Back 5 1/2 x 7 1/2" If stays are fitted with nuts or riveted heads Riveted Working pressure by rules 267
Material of stays Steel Area at smallest part 1 1/16" x 3/4" hole Area supported by each stay 39 sq Working pressure by rules 227 End plates in steam space Yes

Material Steel Thickness 3/8" Pitch of stays Yes How are stays secured Dished Working pressure by rules 225 Material of stays Yes
Area at smallest part Yes Area supported by each stay Yes Working pressure by rules Yes Material of Front plates at bottom Yes

Thickness Yes Material of Lower back plate Yes Thickness Yes Greatest pitch of stays Yes Working pressure of plate by rules Yes
Diameter of tubes Yes Pitch of tubes Yes Material of tube plates Yes Thickness: Front Yes Back Yes Mean pitch of stays Yes

Pitch across wide water spaces Yes Working pressures by rules Yes Girders to Chamber tops: Material Yes Depth and
thickness of girder at centre Yes Length as per rule Yes Distance apart Yes Number and pitch of stays in each Yes

Working pressure by rules Yes Steam dome: description of joint to shell Yes % of strength of joint Yes
Diameter Yes 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 Superheaters discarded - not fitted. Tested by Hydraulic Pressure to Yes

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted Yes

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

Two Main Bearing Bolts Complete. Two Connecting Rod Head Bolts Complete. One set of Coupling Bolts & Nuts. One Bottom End Complete. Two Bottom End Bolts Complete. One full set of Fast & Bulge Pump Valves. Two L.P. Piston. Two M.P. Piston Rings. Two H.P. Piston Rings. Lower half Ecc. Strap. One set of eccentric Rod Guide Bushes. Two sets of Drag Link Brasses. 6 Upper Gills for Link Blocks. 6 Lower Gills for Link Blocks. 6 Eye Bars Head & Nuts. 6 upper Steam Chest Cover Head & Nuts. 6 Lower Steam Chest Cover Head & Nuts. Two Ecc. Bolts & Nuts. Bolts & Nuts & Iron of Various sizes. 50th of Babcock Method.

The foregoing is a correct description,
Hobart Shipbuilding Co. of Orange Texas
Signed & made per J. A. Smith

JW Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920
During erection on board vessel -- April 12th May 3rd 7th 15th 26th 27th June 11th 15th 21st
Total No. of visits 9.

Is the approved plan of main boiler forwarded herewith Yes
SEE PHILADELPHIA REPORT NO. 3116
APPENDED HEREWITH

Dates of Examination of principal parts—Cylinders May 3rd Slides May 3rd Covers May 3rd Pistons May 7th Rods May 7th
Connecting rods May 7th Crank shaft May 15th Thrust shaft May 15th Tunnel shafts May 27th Screw shaft April 8th Propeller April 8th
Stern tube April 12th Steam pipes tested June 11th Engine and boiler seatings May 3rd Engines holding down bolts May 7th 1920
Completion of pumping arrangements June 15th 1920 Boilers fixed May 26th 1920 Engines tried under steam June 15th 1920
Completion of fitting sea connections April 12th 1920 Stern tube April 12th 1920 Screw shaft and propeller April 12th 1920
Main boiler safety valves adjusted June 15th 1920 Thickness of adjusting washers Lock Nuts - Port & Star Valve.

Material of Crank shaft Steel Identification Mark on Do. HB 15.05 (6) Material of Thrust shaft Steel Identification Mark on Do. Log & PR Halls
Material of Tunnel shafts Steel Identification Marks on Do. 978 5-4-20 CH 979 5-4-20 CH 949 10-4-20 CH
Material of Screw shafts Steel Identification Marks on Do. 982 14-5-20 CH 983 14-5-20 CH
Material of Steam Pipes Steel Test pressure 570 lbs 4"

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 Yes

Is this machinery duplicate of a previous case Yes. If so, state name of vessels "Aoris" & "Agoron"

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

The Main Engines of this vessel were constructed under survey of American Bureau of Shipping & shipped in sectional elements to their destination - same have been examined & assembled under our special survey of installation.

The Main Boilers were constructed under Special Survey according to approved design & have been re-assembled & tested under hydraulic pressure & found sound & tight. They have been installed with the various auxiliaries together with Stern Tubes, Shafting, Sea chests, Steam Exhaust & Water piping etc in accordance with approved plans.

Upon completion the entire machinery was tried under full working conditions & found satisfactory.

The Machinery is Eligible in my opinion to be classed & have the notation RMB made in the Register Book in the case of this vessel.

Re: A.B. Certificate covering Loadings - such as were obtainable are attached.

Amount of Entry Fee \$15.00
Special Fee \$181.75
Donkey Boiler Fee \$10.00
Travelling Expenses (if any) \$5.00
When applied for, 19
When received, 19

Committee's Minute
Assigned Lmb 6.20
Subject
New York JUL 13 1920
Machinery Cert.
WRITTEN

