Rpt. 4.

REPORT ON MACHINERY. No. 893

REC'D NEW YORK Nov. 26 1919

Date of writing Report Nov. 15 19 When handed in at Local Office Nov 20 1919 Port of Seattle. Wash. U.S.A

Received at London Office WED 24 DEC 1919

No. in Reg. Book. FIRST ENTRY Survey held at Seattle. Date, First Survey July 24th Last Survey Oct. 22nd 1919 (Number of Visits 17)

In the new Wood Motor Ship "BALCATTA" Tons Gross 3109 Net 2482

Master E. Bodard Built at Seattle By whom built Patterson McDonald S.B.Co When built 1919

Engines made at Auburn N.Y. By whom made McIntosh Seymour Corpn when made 1919

Boilers made at . By whom made when made

Registered Brake Horse Power Each- 500 Total- 1000 Owners J. E. Chilberg Port belonging to Seattle.

Nom. Horse Power as per Section 28 188 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

&c.—Description of Engines Two 4 Cycle Diesel type No. of Cylinders Each 6 Total 12 No. of Cranks Each - 6 Total - 12

...ders 16" Length of Stroke 24 Revs. per minute 185 Dia. of Screw shaft as per rule 8.23 as fitted 8.75 Material of screw shaft Steel

...shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight ...ller boss Yes If the liner is in more than one length are the joints burned Each Length Separate If the liner does not fit tightly at the part ...bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive, If two ...tted, is the shaft lapped or protected between the liners No Length of stern bush 36" Strutt Bearings.

...el shaft as per rule as fitted Dia. of Crank shaft journals as per rule 9.435 as fitted 9.5 Dia. of Crank pin 9.5 Size of Crank webs 13 x 5½ Dia. of thrust shaft under ...5 Dia. of screw 8'.0" Pitch of Screw 6'-4" No. of Blades 3 State whether moveable No Total surface 15.8 ...

... pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

... pumps 2 Triplex Diameter of ditto 5" Stroke 8" Can one be overhauled while the other is at work Yes

...ey Engines 2 Centrifugal Sizes of Pumps 5" No. and size of Suctions connected to both Bilge and Donkey pumps ... Room 2-3"

In Holds, &c. Fore Hold 2-3". Main Hold 2-3" Fore Peak 1-3"

...njections 2 sizes 4" Connected to ~~condenser, or to~~ circulating pumps Yes Is a separate Donkey Suction fitted in Engine room & size Yes 1- 3½

...lge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None

...ections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves

...d sufficiently high on the ship's side to be seen without lifting the ~~platings~~ planking plates Yes Are the Discharge Pipes above or below the deep water line at Water Line.

... fitted with a Discharge Valve always accessible on the ~~plating~~ planking of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate ...

... are carried through the bunkers None How are they protected

...es, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

...e Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

... Shaft Tunnel watertight None Is it fitted with a watertight door worked from

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

...ting Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

...Pressure Tested by hydraulic pressure to Date of test No. of Certificate

...oiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to ... Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

...tance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates ... Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams ... Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

...s of strength of longitudinal joint rivets plate Working pressure of shell by rules Size of manhole in shell

...pensating ring No. and Description of Furnaces in each boiler Material Outside diameter

...plain part top bottom Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings

...ressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

...ays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

...f stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space: ... Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

... smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom ... Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

...f tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

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

... pressure by rules Steam dome: description of joint to shell % of strength of joint ... 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 Date of Approval of Plan Tested by Hydraulic Pressure to

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

W734-0219

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded?

SPARE GEAR. State the articles supplied :—

Main Engines:

1 Set top and bottom end bearings
1 Bottom half of main bearing
1 Centrifugal crank pin oiler
12 Burkel plates.
12 Fuel pump plunger packing rings
24 Needle Valve rings
6 Fuel pump valves (3 Suction 3 delivery)
1 Set HP air compressor valves and springs.
½ " HP " " "
12 Ball valves for fuel pump lines
6 Exhaust valve springs

The following spare parts supplied in additition to the spare parts supplied by the Engine builders noted in the New York Report No 16029

2 Air Starting Valves
3 Needle Valves.
a quantity of gaskets for Cylinder heads, air compressor and fuel pumps.

AUXILIARY ENGINES

A complete set of parts for Fairbanks Morse Engines air compressors, Triples & reciprocating & centrifugal pumps

Lengths of pipe suitable for fuel blast pipes, and air Compressors with unions and flanges suitable for each

The foregoing is a correct description,

A F Marshall Gen Supt Pattison Manufacturer. MacDonald

Dates of Survey while building { During progress of work in shops - - } July 24-30 Aug 4
{ During erection on board vessel - - - } July 24 Aug 4-5-14-25 Sep 3-10-16-26 Oct 6-8-10-21-22.
Total No. of visits 17

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods

Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft July 30 Aug 4 Propeller July 30 Aug. 4

Stern tube July 24 Aug. 5 Steam pipes tested — Engine ~~and boiler~~ seatings Aug 5-14 Engines holding down bolts Oct 6-21

Completion of pumping arrangements Oct 6-10 ~~Boilers fixed~~ ✓ Engines tried under ~~steam~~ power Oct 10

Completion of fitting sea connections Oct 6 Stern tube Aug 5 Screw shaft and propeller Aug 5

Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓

Material of Crank shaft Identification Mark on Do. Material of Thrust shafts Identification Mark on Do. LLOYD'S No 271-272 6-12-18 T

Material of Tunnel shafts None Identification Marks on Do. Material of Screw shafts Steel ✓ Identification Marks on Do. LLOYD'S No 287 NT 4351 29-11-18

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel 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 Yes ✓ If so, state name of vessel "BENOWA" and "BABINDA"

General Remarks (State quality of workmanship, opinions as to class, &c. These Diesel Engines (Builders Nos 1651 and 1652) built by the McIntosh & Seymour Corpn. Auburn N.Y. under special survey. have been installed in this vessel together with tail shafts, stern tubes, struts, sea connections, auxiliaries, pipes and fittings under special survey, the material tested in accordance with the Rules of the Society and the workmanship good. One 75 HP two cylinder and one 37½ HP one cylinder Fairbanks Morse oil engine installed and direct connected to Electric generators for power and lighting. All auxiliary pumps, air compressors, steering gear, windlass and deck winches are operated by electric motors. Auxiliary installation consists of an air compressor 9"x3½"x and one Booster 7/8x3", one 5" centrifugal pump connected to the bilges direct and to bilge manifold two triples reciprocating 5"x8" pumps connected to bilges, bilge manifolds and general service, one triplex 4"x6" reciprocating pump for oil transfer, also centrifugal pumps for sanitary and fresh water purposes

On completion the machinery tried under working conditions and the working and manoeuvring found satisfactory. The machinery eligible, in my opinion, to be classed and to have the record in the Register Book of the Society + LMC 10.19. Oil Engine 4 SC. SA. 12 Cys.

The amount of Entry Fee ... £ : :
Special ... ... $ 50 : 00 :
Donkey Boiler Fee and other Travelling Expenses (if any) ... £ : :
$ 13 : 25 :

When applied for, Nov. 15th 1919
When received. 19/12/20

19/12/20

James Fowler
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York DEC - 2 1919

Assigned + L M C 10.19 Subject

FULL CERTIFICATE WRITTEN 7.1.20

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.