

REPORT ON MACHINERY

No. 74078

THU. 3 FEB. 1921

Received at London Office

2 - FEB 1921 Port of

NEWCASTLE-ON-TYNE

Date of writing Report

10

When handed in at Local Office

No. in Survey held at

South Shields

Date, First Survey

14th Dec.

Last Survey

28th Jan 1921

Reg. Book.

on the S.S. Trevinnard Ex Ammon

(Number of Visits)

Gross 7233

Master

Built at Hensburg

By whom built Hensburger Schiffst. Ges.

When built 1914

Engines made at Hensburg

By whom made Hensburger Schiffst. Ges.

when made 1914

Boilers made at Hensburg

By whom made Hensburger Schiffst. Ges.

when made 1914

Registered Horse Power

Owners Ham S.S. Co. Ltd.

Port belonging to St. Jona

Nom. Horse Power as per Section 28

686

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

31¹/₁₆, 50¹/₁₆, 84¹/₁₆

Length of Stroke

53⁹/₁₆

Revs. per minute

73

Dia. of Screw shaft

as per rule 16.5

Material of screw shaft

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

Is 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

No

Length of stern bush

5'-9"

Dia. of Tunnel shaft

as per rule 15.3

Dia. of Crank shaft journals

as per rule 16.1

Dia. of Crank pin

16.3

Size of Crank webs

10¹/₄ x 23¹/₄

Dia. of thrust shaft under

collars

16.1

Dia. of screw

20¹/₁₆

Pitch of Screw

16¹/₄"

No. of Blades

4

State whether moveable

Yes

Total surface

97¹/₂

No. of Feed pumps

2

Diameter of ditto

8¹/₁₆"

Stroke

21"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4¹/₁₆"

Stroke

31³/₁₆"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

4

Sizes of Pumps

Fresh Water Pump 5¹/₂ x 2³/₄ x 3¹/₂"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

5

3¹/₂" dia.

1 direct, 2 in 1

2 in 1

In Holds, &c. 2 in No. 1, 2, 3, 4, 5, 6, holds dia 3¹/₂"

No. of Bilge Injections

1

sizes

8" dia

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes

3¹/₂" dia

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

No

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

below

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

No

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

Top Engine room platform

BOILERS, &c.—(Letter for record

3)

Manufacturers of Steel

Total Heating Surface of Boilers

9765¹/₂

Is Forced Draft fitted

Yes

No. and Description of Boilers

4 Single Ended.

Working Pressure

185 lbs

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

47.5 sq. ft.

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

11.04

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

2' 4"

Mean dia. of boilers

14.9¹/₁₆"

Length

12'-1¹/₄"

Material of shell plates

Steel

Thickness

1¹/₈"

Range of tensile strength

29¹/₄

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Double r

long. seams

D.B.S.

Diameter of rivet holes in long. seams

1¹/₁₆"

Pitch of rivets

4¹/₁₆"

Lap of plates or width of butt straps

27³/₄"

Per centages of strength of longitudinal joint

plate

Working pressure of shell by rules

203 lbs

Size of manhole in shell

16¹/₂" x 12³/₄"

Size of compensating ring

9" x 1¹/₈"

No. and Description of Furnaces in each boiler

3

Material Steel Outside diameter

45.6

Length of plain part

top

Thickness of plates

bottom

9¹/₁₆"

Description of longitudinal joint

Weld

No. of strengthening rings

None

Working pressure of furnace by the rules

200

Combustion chamber plates: Material

Steel

Thickness: Sides

2¹/₃₂"

Back

3¹/₈"

Top

2¹/₃₂"

Bottom

1"

Pitch of stays to ditto: Sides

7¹/₈ x 7¹/₈"

Back

7¹/₈ x 7¹/₈"

Top

7¹/₈ x 7¹/₈"

If stays are fitted with nuts or riveted heads

None

Working pressure by rules

241

Material of stays

Steel

Area at smallest part

1.48"

Area supported by each stay

62"

Working pressure by rules

191 lbs

End plates in steam space:

Material

Steel

Thickness

1¹/₄"

Pitch of stays

15" x 15"

How are stays secured

S. nuts

Working pressure by rules

241 lbs

Material of stays

Steel

Area at smallest part

7.06"

Area supported by each stay

225"

Working pressure by rules

323 lbs

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel</

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two top end brasses. Four top end bolts. Two bottom end bolts. One crank shaft coupling bolt. Twelve coupling bolts for tunnel shafting. Two main bearings bolts. Two eccentric strap bolts. One port pump link. One crank pin brass. One back pump link. One main engine valve spindle. One spare tail shaft. One propeller blade & boss. One spare crank shaft. One set of feed and bilge pump valves & seats. Twenty four studs for main engine gland cover. One spare head valve complete for air pumps. Two spare piston rings for S.P. and three for P.M. One spare seal & valve for ballast pump. Full set of spares for main pumps. A quantity of various bolts & nuts & iron of various sizes & one set of check valves.*
The foregoing is a correct description.

Manufacturer. *[Redacted]*

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

Is the approved plan of main boiler forwarded herewith *No*

Dates of Examination of principal parts—Cylinders *17.12.20* Slides *17.12.20* Covers *17.12.20* Pistons *17.12.20* Rods *17.12.20*
Connecting rods *17.12.20* Crank shaft *17.12.20* Thrust shaft *17.12.20* Tunnel shafts *17.12.20* Screw shaft *11.12.20* Propeller *11.12.20*
Stern tube *11.12.20* Steam pipes tested *29.1.21* Engine and boiler seatings *5.1.21* Engines holding down bolts *5.1.21*
Completion of pumping arrangements examined *22.12.20* Boilers fixed *✓* Engines tried under steam *27.1.21*

Completion of fitting sea connections *11.12.20* Stern tube *11.12.20* Screw shaft and propeller *11.12.20*
Main boiler safety valves adjusted *27.1.21* Thickness of adjusting washers *7/16" 7/16" 7/16" 7/16" 7/16" 7/16" 7/16" 7/16"*

Material of Crank shaft *Steel* Identification Mark on Do. *✓* Material of Thrust shaft *Steel* Identification Mark on Do. *✓*

Material of Tunnel shafts *Steel* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *✓*

Material of Steam Pipes *Steel* Test pressure *✓*

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 and boiler of this vessel*

were built under the supervision of the Germanischer Lloyd Society. The scantlings of the boiler are in accordance to the plan approved by Lloyd's Register of Shipping on the 20th December 1920. The vessel was placed in Palmer's Bay Dock, Halmstad, and the following examination was made:— The screw shaft (continuous liner) stem bush, (near 1/2) propeller, sea connections and all outside fastenings, the cylinders, pistons, slides, casings, crank, thrust and tunnel shafting and all bearings, the condenser, air, circulating feed and bilge pumps all auxiliary machinery and found in good working order. The main boiler with their mountings, safety valves, doors & fastenings were examined & found in good order. The scantlings of the engine & boiler were checked & found to comply generally with the Society's Rules. The main steam pipes (Steel) were examined in place & found in good condition. The main and auxiliary machinery were tried under steam, and the main boiler safety valves adjusted under steam, valves lifting at 190 lbs.

The machinery throughout is now in good and safe working condition and capable in our opinion to have the record of L.M.C. 1.21. Marked in the Society's Register Book.

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Rpt. 11b.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.—STEAM SHIPS.

N576-0193

Index No. *(For London Office)*

PARTICULARS RELATING TO ALL STEAM SHIPS EITHER FLUSH DECKED, OR WITH TOP GALLANT FORECASTLES, SHORT POOPS AND BRIDGE HOUSES DISCONNECTED, OR WITH TOP GALLANT FORECASTLES HAVING LONG POOPS, OR RAISED QUARTER DECKS CONNECTED WITH BRIDGE HOUSES, OR OTHERWISE.

Port of Survey

Date of Survey

Name of Surveyor

Ship's Name *Hewinnard* Port of Registry and Nationality. Official Number. Gross Tonnage. Date of Build. Particulars of Classification.

Number in Register Book

Registered dimensions from Ship's Register. LENGTH. BREADTH. DEPTH. UNDER DECK TONNAGE. Moulded Depth as measured. *31-3*

Length on LOADLINE. *471* Rule " Sheer " Peak Tanks Addition for Keel below base line for draught record. *note Olden's on the 31-4. 3*

CORRECTION FOR LENGTH. Length of Ship on Loadline. *471* Length in Table Difference Correction for 10ft., Table A. Table C. x Difference divided by 10 (if required.) If 1/10ths length covered divide by 2

CORRECTION FOR IRON DECK. Proportion covered, if less than 1/10ths length covered Thickness of usual wood deck, less stringer *no wood deck*

CORRECTION FOR ROUND OF BEAM. Breadth at Gunwale amidships. *60.5* Round of Beam *15* Normal round Difference ÷ 2 = Proportion of Deck uncovered (Para. 19)

Sheer (Stem. *126* at Sternpost *84*) ÷ 2 = ... Mean Sheer at 1/4 of the length from Stem *69* Sternpost *44* ÷ 2 = ... Mean Gradual mean Sheer Standard mean Sheer [Table, Para. 18] Difference ÷ 4 = Correction § If limited as Para. 18 (f)

Rise in Sheer from amidships { At front of bridge house ... At after end of forecastle ... [Para. 18 (e)]

Fall in Sheer { Para. 18 (d) Length uncovered Correction

ALLOWANCE FOR DECK ERECTIONS:— Freeboard, Table A. Correction for Sheer Correction for Length, if required (Para. 12, 13, and 14) Freeboard by Table A, corrected for sheer, and for length, if required (Para. 12, 13, and 14) Difference Percentage as below

Correction for R. Q. Dk. if engine and boiler openings not covered by bridge house (Para. 11) Allowance for Deck Erections Length. Length allowed. Height.

Forecastle. Bridge House. *439.25* *7.25* Poop. *24.50* Total Length of Ship Corresponding percentage (Para. 11, 12, 13, or 14)

FREEBOARD recommended amidships from centre of Disc to top of Statutory Deck Line, Wood (Iron) Deck:— Fresh Water Line above centre of Disc Indian Summer Line " " Winter Line below " Winter North Atlantic Line " "

Winter Freeboard Summer Freeboard Indian Summer Freeboard N. A. Winter Freeboard Correction necessary because clearside amidships, measured in accordance with the Statute is not taken at the intersection of the wood or iron deck with side. *13/4*

Winter Freeboard from deck line Summer " Indian Summer " N. A. Winter " FREEBOARD recommended amidships from centre of Disc to top of Statutory Deck Line, Wood (Iron) Deck:—

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