

REPORT ON MACHINERY. No. 2476.

REC'D NEW YORK

April 4. 1917.

Received at London Office

TUE 24 APR 1917

Date of writing Report March 24 17 When handed in at Local Office

Port of SAN FRANCISCO,

No. in Survey held at Oakland, California.

Date, First Survey April 26/16

Last Survey March 9th 1917

Reg. Book. on the s/s "T H O R D I S", Yard No. 110.

(Number of Visits 20)

Gross 4768
Tons Net 3523

Master O. Jensen Built at Oakland, Cal. By whom built Moore & Scott Iron Works When built 1917

Engines made at Schnectady, NY. By whom made General Electric Co. when made 1917

Boilers made at Seattle, Wash. By whom made Commercial Boiler Works. when made 1917

Registered Horse Power Owners Atkieselskabet "Thelma" Port belonging to Grimstad, Norway.

Shaft Horse Power at Full Power 2400 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

RBINE ENGINES, &c.—Description of Engines Geared Turbines No. of Turbines 1

Diameter of Rotor Shaft Journals, H.P. 8 L.P. Diameter of Pinion Shaft 7

Diameter of Journals Distance between Centres of Bearings Diameter of Pitch Circle

Diameter of Wheel Shaft Distance between Centres of Bearings Diameter of Pitch Circle of Wheel

Width of Face Diameter of Thrust Shaft under Collars 14" Diameter of Tunnel Shaft as per rule 12.31

No. of Screw Shafts Diameter of same as per rule 13.17 as fitted 14" Diameter of Propeller 15'10" Pitch of Propeller 14'9"

No. of Blades 4 State whether Moveable yes Total Surface 83.3 sq.ft. Diameter of Rotor Drum, H.P. L.P. Astern

Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine 3380 Propeller 90

RTICULARS OF BLADING. (See New York 1st Entry Report.

H.P.

L.P.

ASTERN.

	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION									
"									
"									
"									
"									
"									
"									

and size of Feed pumps 2-DeLaval Turbine 3-stage.

and size of Bilge pumps 1-Duplex 6x5½x6 1-Duplex 12x8½x12 1-Ballast pump Duplex 12x10½x12

and size of Bilge suction in Engine Room & Boiler room 4-3½"

In Holds, &c. F.P. 1-3". No. 1 hold 2-3½". No. 2 hold 2-3½".

Deep tank 2-3½" No. 3 hold 2-3½". No. 4 hold 2-3½". After well 1-3½" After Peak 1-3"

of Bilge Injections 1 sizes 12" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine Room & size yes, 3½"

All the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes

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 yes

Are all pipes carried through the bunkers none How are they protected

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 deck.

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

Total Heating Surface of Boilers 7509 Is Forced Draft fitted no No. and Description of Boilers (See Seattle 1st Entry Rpt.)

Working Pressure 210 lbs. Tested by hydraulic pressure to Date of test No. of Certificate

Is each boiler worked separately yes Area of fire grate in each boiler No. and Description of Safety Valves to

each boiler 2-spring loaded. Area of each valve 9'6" Pressure to which they are adjusted 210 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

plates of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter

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

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

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

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

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

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Steam dome: description of joint to shell % of strength of joint Diameter

Thickness of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets

Working pressure of shell by rules Crown plates: Thickness How stayed



Lloyd's Register
Foundation

SUPERHEATER. Type Foster Date of Approval of Plan Type approved 1915. Tested by Hydraulic Pressure to 630 lbs. pt. 4.

Date of Test Feb. 26th 1917 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes

Diameter of Safety Valve 1 1/2" Pressure to which each is adjusted 250 lbs. Is Easing Gear fitted no

IS A DONKEY BOILER FITTED? no. If so, is a report now forwarded? -

SPARE GEAR. State the articles supplied:— 1-tail shaft and nut complete. 1-set bilge pump valves.

1-set air pump valves. 1-steam chest with valve and stem complete for air pump.

50-condenser tubes. 1-propeller blades. 2-boiler tubes. 6-superheater tubes.

1-set of coupling bolts. Assorted bolts and nuts and bar iron.

The foregoing is a correct description,

MOORE & SCOTT IRON WORKS,

By

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } Apr. 26th, Sept. 22nd, Oct 12th, Dec. 15th, 20th, 29th 1916.
{ During erection on board vessel -- } Nov 27th, Dec. 29th/16 Jan 5th, 23rd, Feb. 5, 16, 19, 21, 24, 26 Mar. 1, 5, 6, 9th 1917.
Total No. of visits twenty (20) Is the approved plan of main boiler forwarded herewith copy.

Dates of Examination of principal parts—Casings Rotors Blading Gearing

Rotor shaft Thrust shaft Feb. 21st Tunnel shafts Screw shaft Feb. 19th Propeller Feb. 24th

Stern tube Oct 12th Steam pipes tested Feb. 26th Engine and boiler seatings Jan 23rd Engines holding down bolts Mar. 6th

Completion of pumping arrangements Feb. 16th Boilers fixed Jan 23rd Engines tried under steam Mar 6th

Main boiler safety valves adjusted Mar 6th Thickness of adjusting washers Lock nuts.

Material and tensile strength of Rotor shaft Identification Mark on Do.

Material and tensile strength of Pinion shaft Identification Mark on Do.

Material of Wheel shaft Identification Mark on Do. Material of Thrust shaft steel Identification Mark on Do.

Material of Tunnel shafts steel Identification Marks on Do. No. 2030 JB Material of Screw shafts steel Identification Marks on Do. No. 31, 23

Material of Steam Pipes steel Test pressure 630 lbs. No. 39, 29

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes

Have the requirements of Section 49 of the Rules been complied with yes

Is this machinery a duplicate of a previous case yes If so, state name of vessel "CAPTO" - S.Fo. Rpt. No. 2436.

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery & Boilers were constructed under

Special Survey, of materials tested to rule requirements. Workmanship sound throughout.

On completion the Machinery was thoroughly tested under working conditions with satisfactory results.

In the opinion of the undersigned the Machinery is eligible to be classed in the Register Book with

notation of *LMC 3, 17 Fitted for oil fuel 3, 17 F.P. above 150°F. Electric Light.

It is submitted that
this vessel is eligible for

1 Geared Steam Turbine THE RECORD. + LMC 3. 17.

Fitted for oil fuel 3. 17. F. P. above 150°F

The amount of Entry Fee ... \$ 15.00 : When applied for,
Special ... \$ 220.00 : Mar. 28 1917
Donkey Boiler Fee ... £ : When received,
Travelling Expenses (if any) N Y £ 1.25 : 19/5/17
1/3 fee, credit N.Y.

Committee's Minute New York APR 5 1917

Assigned

+ Lmc 3. 17. Fitted for oil fuel 3. 17 F. P. above 150°F
Elec Light

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