

REPORT ON MACHINERY.

No. 15362

Received at London Office

REC'D NEW YORK *Aug. 14 1918*

Date of writing Report 19 *1918* When handed in at Local Office 19 *1918* Port of *NEW YORK NY*

No. in Survey held at *SCHENECTADY NY* Date, First Survey Last Survey 19 *1918*

Reg. Book. *Entry on the* *Steel Screw Steamer Western Cross* Tons { Gross Net

Master Built at By whom built When built

Engines made at *SCHENECTADY NY* By whom made *GENERAL ELECTRIC COY.* when made *1918*

Boilers made at By whom made when made

Registered Horse Power Owners Port belonging to

Shaft Horse Power at Full Power *2500* Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

TURBINE ENGINES, &c.—Description of Engines *GEARED TURBINE (TURBINE 13454 GEAR 3021)* No. of Turbines *ONE*

Diameter of Rotor Shaft Journals, H.P. *8"* L.P. *7"* Diameter of Pinion Shaft *7"* H.S. PINION *7.833*

Diameter of Journals " *GEAR 10"* Distance between Centres of Bearings " *GEAR 37.5"* Diameter of Pitch Circle " *GEAR 37.666* L.S. PINION *10.75"*

Diameter of Wheel Shaft *14"* Distance between Centres of Bearings *L.S. PINION 52"* Diameter of Pitch Circle of Wheel " *GEAR 54.75"*

Width of Face *14 3/5"* Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule as fitted

No. of Screw Shafts Diameter of same as per rule as fitted Diameter of Propeller Pitch of Propeller

No. of Blades State whether Moveable Total Surface 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 *3374.5* Propeller *90*

PARTICULARS OF BLADING.

	ACTIVE. HEIGHT OF BLADES.	H.P. PITCH. DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	L.P. DIAMETER AT TIP.	NO. OF ROWS.	ACTIVE HEIGHT OF BLADES.	ASTERN. PITCH. DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	<i>75-1.25</i>	<i>2-11 1/2"</i>	<i>2</i>				<i>8125-1.5</i>	<i>2'-3"</i>	<i>2</i>
2ND	<i>6.25</i>	<i>2'-9"</i>	<i>1</i>				<i>3.375</i>	<i>2'-3"</i>	<i>1</i>
3RD	<i>1.25</i>	<i>2'-10 1/2"</i>	<i>1</i>						
4TH	<i>2.5</i>	<i>4'-0"</i>	<i>1</i>						
5TH	<i>6.0</i>	<i>4'-2"</i>	<i>1</i>						
6TH									
7TH									
8TH									

No. and size of Feed pumps

No. and size of Bilge pumps

No. and size of Bilge suction in Engine Room

In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size

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

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

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

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

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

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

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

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

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

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

Size 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

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

Pitch 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

006175-006188-00617

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

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

General Electric Co.
per S. A. Berg.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1918.
JUNE 17 25 27 JULY 25 12.
During erection on board vessel ---
Total No. of visits

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Casings

Rotors

Blading

Gearing

Rotor shaft

Thrust shaft

Tunnel shafts

Screw shaft

Propeller

Stern tube

Steam pipes tested

Engine and boiler seatings

Engines holding down bolts

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

Material and tensile strength of Rotor shaft

STEEL 80,000 LBS. MINIMUM

Identification Mark on Do. T.G.D.

Material and tensile strength of Pinion shaft

85,000

Identification Mark on Do. T.G.D.

Material of Wheel shaft

STEEL

Identification Mark on Do.

T.G.D.

Material of Thrust shaft

Identification Mark on Do.

Material of Tunnel shafts

Identification Marks on Do.

Material of Screw shafts

Identification Marks on Do.

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 a duplicate of a previous case

If so, state name of vessel

General Remarks

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

These engines have been constructed under Special Survey in accordance with the approved plans. The materials and workmanship are sound and good. The engines have been forwarded to San Francisco Cal. to be fitted on board.

The amount of Entry Fee

£

Special

£

Donkey Boiler Fee

£

Travelling Expenses (if any)

£

When applied for,

19

When received,

19

Committee's Minute

New York NOV 6 1918

Assigned

See Sea. Rpt 722.

H. E. Doss

Engineer Surveyor to Lloyd's Register of Shipping.



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