

REC'D NEW YORK JAN 13 1943

AUX

Rpt. 4a.

REPORT ON ~~STEAM~~ TURBINE MACHINERY. No. 8299

Received at London Office

Date of writing Report 19... When handed in at Local Office 19... Port of Philadelphia

No. in Survey held at Essington Pa Date, First Survey 21 July Last Survey 22 July 1942

Reg. Book. SIS MARKAY. (Number of Visits 2)

on the Tons } Gross 10242
Net

Built at Chester Pa By whom built Sun S B & D Co Yard No. 232 When built 1942

Engines made at Essington Pa By whom made Westinghouse E.M. & G Engine No. 27805-314 When made "

Boilers made at Barberton Ohio By whom made Babcock & Wilcox Co Boiler No. When made "

Shaft Horse Power at Full Power Owners Keystone Tankship Corp Port belonging to Wilmington Del

Nom. Horse Power as per Rule 1726 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Carrying Petroleum in bulk.

STEAM TURBINE ENGINES, &c.—Description of Engines 2. 400 KW turbo generating sets.

No. of Turbines Ahead 1 Direct coupled, single reduction geared to generator propelling shafts. No. of primary pinions to each set of reduction gearing 1

Astern... double reduction geared

direct coupled to Alternating Current Generator 3 phase 60 periods per second } rated 400 Kilowatts 230 Volts at 1200 revolutions per minute;
Direct Current Generator }
for supplying power for driving lights Propelling Motors, Type

rated Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

TURBINE BLADING.	H. P.			I. 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.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	0.463"	25.71"	1									
2ND	0.937"	26.19"	1									
3RD	0.929"	26.18"	1									
4TH	1.815"	27.07"	1									
5TH	0.929"	26.18"	1									
6TH	1.815"	27.07"	1									
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine { H.P. 5805 }
I.P. }
L.P. }
Revolutions per minute, at full power, of each Turbine Shaft { H.P. 5890 }
I.P. } 1st reduction wheel 1200
L.P. } main shaft

Rotor Shaft diameter at journals { H.P. 2.495" }
I.P. } Pitch Circle Diameter { 1st pinion 5.244" }
L.P. } { 2nd pinion } main wheel { 1st reduction wheel 25.715" }
Width of Face { 1st reduction wheel 7.75" }
main wheel

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 7.625" }
2nd pinion } main wheel { 1st reduction wheel 7.938" }
main wheel

Flexible Pinion Shafts, diameter { 1st }
2nd } Pinion Shafts, diameter at bearings External 1st 3.990" 2nd } diameter at bottom of pinion teeth { 1st 4.931" }
Internal } 2nd }

Wheel Shafts, diameter at bearings { 1st 6.240" }
main } diameter at wheel shroud, { 1st 25.977" } Generator Shaft, diameter at bearings
main } Propelling Motor Shaft, diameter at bearings

Intermediate Shafts, diameter as per rule... as fitted... Thrust Shaft, diameter at collars as per rule... as fitted... 5/8"

Tube Shaft, diameter as per rule... as fitted... Screw Shaft, diameter as per rule... as fitted... Is the tube screw shaft fitted with a continuous liner { }

Bronze Liners, thickness in way of bushes as per rule... as fitted... Thickness between bushes as per rule... as fitted... Is the after end of the liner made watertight in the propeller boss... If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner... 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... If two liners are fitted, is the shaft lapped or protected between the liners... Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft... If so, slate type... Length of Bearing in Stern Bush next to and supporting propeller... Propeller, diameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet.

If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine... Can the H.P. or L.P. Turbine exhaust direct to the

Condenser No. of Turbines fitted with astern wheels... Feed Pumps { No. and size }
How driven

Pumps connected to the Main Bilge Line { No. and size }
How driven

Ballast Pumps, No. and size... Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler... Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room... In Pump Room

In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size... Independent Power Pump Direct Suctions to the Engine Room

Bilges, No. and size... Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the ship... Are they fitted with Valves or Cocks

Are they sized sufficiently high on the ship's side to be seen without lifting the stokehold plates... Are the Overboard Discharges 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 pass through the bunkers... How are they protected

What pipes pass through the deep tanks... Have they been tested as per rule

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

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another... Is the Shaft Tunnel watertight... Is it fitted with a watertight door



W996-0149

BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers

Is Forced Draft fitted _____ No. and Description of Boilers _____ Working Pressure _____

Is a Report on Main Boilers now forwarded? _____

Is { a Donkey } Boiler fitted? _____ If so, is a report now forwarded? _____
 { an Auxiliary }

Is the donkey boiler intended to be used for domestic purposes only _____

Plans. Are approved plans forwarded herewith for Shafting _____ Main Boilers _____ Auxiliary Boilers _____ Donkey Boilers _____
 (If not state date of approval)

Superheaters _____ General Pumping Arrangements _____ Oil Fuel Burning Arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied _____

State the principal additional spare gear supplied _____

Yes

The foregoing is a correct description,

Westinghouse Electric & Mfg Co Manufacturer.
J. H. Brown

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

July 21st & 22nd 1942
24 Aug 1942

Dates of Examination of principal parts—Casings *22 July* Rotors *22 July* Blading *22 July* Gearing *22 July*

Wheel shaft *22 July* Thrust shaft _____ Intermediate shafts _____ Tube shaft _____ Screw shaft _____

Propeller _____ Stern tube _____ Engine and boiler seatings _____ Engine holding down bolts _____

Completion of fitting sea connections _____ Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Rotor shaft, Material and tensile strength *OH Steel 102000 lb* Identification Mark *234 C.D. WHR.*

Flexible Pinion Shaft, Material and tensile strength _____ Identification Mark _____

Pinion shaft, Material and tensile strength *OH Steel 98000 lb 105500 lb* Identification Mark *4014 WHR. 1983*

1st Reduction Wheel Shaft, Material and tensile strength _____ Identification Mark _____

Wheel shaft, Material _____ Identification Mark _____ Thrust shaft, Material _____ Identification Mark _____

Intermediate shafts, Material _____ Identification Marks _____ Tube shaft, Material _____ Identification Marks _____

Screw shaft, Material _____ Identification Marks _____ Steam Pipes, Material _____ Test pressure _____

Date of test _____ 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 the Rules for the use of oil as fuel been complied with _____

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo _____ If so, have the requirements of the Rules been complied with _____

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with _____

Is this machinery a duplicate of a previous case *Yes* If so, state name of vessel *S/S SEAKAY.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *These 2 - 400 KW generating sets have built under Special Survey, and in accordance with the approved plans, the workmanship & materials are good. They have been subjected to the over speed & over load tests with satisfactory results. The sets have been satisfactorily installed on board the vessel, tried under full load & all found in good order.*

The amount of Entry Fee ... £	:	:	When applied for,
Special <i>✓</i> ... £	:	:	<i>23rd Oct 1942</i>
Donkey Boiler Fee ... £	:	:	<i>subd.</i>
Travelling Expenses (if any) <i>£100.00</i>	:	:	When received,
	:	:	19...

W. H. Penham
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____
 Assigned *See attached First Entry Report*

NEW YORK JAN 13 1943



Rpt. 5c.
 Date of writing _____
 No. in Reg. Bk. _____
 Master _____
 Engines made by _____
 Boilers made by _____
 NOMINAL Registered _____
WATER
 (Letter for _____)
 of Boilers _____
 No. of Cert _____
 Is forced d _____
 Main and _____
 each boiler _____
 Are they fitt _____
 Smallest dis _____
Steam Dr _____
 Range of T _____
 Cir. seams _____
 Lap of plat _____
 Diameter of _____
 If Drum h _____
 (if fitted) _____
 by rules _____
 Size of Ma _____
 Material of _____
 or flanged _____
 long. seams _____
 Percentage s _____
 Percentage s _____
 Radius or h _____
 Material _____
 Area at sma _____
 Thickness _____
 Percentage s _____
 Description _____
 by Rules _____
UPERHE _____
 Date of Tes _____
 Diameter of _____
 Is a drain c _____
 Spare Ge _____
 Dates of Survey while building { D _____
 { D _____
 { D _____
GENERA _____
 under _____
 re good _____
 It has _____
 melts a _____
 Survey F _____
 Travelling _____
 Committe _____
 Assigned _____