

Rpt. 4a.

## REPORT ON STEAM TURBINE MACHINERY.

No. 9270

Date of writing Report 13th Apr. 49 When handed in at Local Office 13 Apr. 1949 Port of PHILADELPHIA, PA.

No. in Survey held at Chester, Pa. Date, First Survey 19th March, Last Survey 28th March, 1949

Reg. Book. on the S. S. "KUWAIT" (Number of Visits two)

Tons } Gross  
Net

Built at Chester, Pa. By whom built Sun S.B. &amp; D.D. Co. Yard No. 567 When built 1949

Engines made at Fitchburg, Mass. By whom made General Elec. Co. Turb. No. 71567 When made "

Boilers made at - By whom made - Gear No. 86347

Shaft Horse Power at Full Power - Owners Gulf Oil Co. Boiler No. - When made -

Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended Foreign

## STEAM TURBINE ENGINES, &amp;c.—Description of Engines Geared Turbine Generator Set

No. of Turbines Ahead ~~Direct coupled~~ single reduction geared } to propelling shafts. No. of primary pinions to each set of reduction gearingAstern ~~Direct coupled~~ } Alternating Current Generator 3 phase 60 periods per second } rated 400 Kilowatts 440 Volts at 1200 revolutions per minute;for supplying power for driving ~~Propelling Motors, &c.~~ Auxiliary Machinery and Lighting

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	.440"	19.342"	1									
2ND	.695"	17.597"	1									
3RD	1.110"	17.614"	1									
4TH	1.040"	18.372"	1									
5TH	1.420"	19.102"	1									
6TH	2.200"	20.230"	1									
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine { H.P. 10,059  
I.P. 1st reduction wheel  
L.P. main shaft 1200Rotor Shaft diameter at journals { H.P. 2.50"  
I.P. Pitch Circle { 1st pinion 3.4" 1st reduction wheel  
L.P. Diameter { 2nd pinion main wheel 23.5" Width of Face { 1st reduction wheel 8-1/4"  
main wheel 8-1/4"Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 6" 1st reduction wheel  
2nd pinion main wheel 6"Flexible Pinion Shafts, diameter { 1st Pinion Shafts, diameter at bearings External 3" 2nd { diameter at bottom of pinion teeth { 1st 3.1686"  
2nd Internal { 2ndWheel Shafts, diameter at bearings { 1st 4" diameter at wheel shroud, { 1st Generator Shaft, diameter at bearings 3"  
main 4-1/8" Propelling Motor Shaft, diameter at bearingsIntermediate Shafts, diameter as per rule Thrust Shaft, diameter at collars as per rule  
as fittedTube Shaft, diameter as per rule Screw Shaft, diameter as per rule Is the { tube } shaft fitted with a continuous liner {  
as fittedBronze Liners, thickness in way of bushes as per rule Thickness between bushes as per rule Is the after end of the liner made watertight in the  
as fitted

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, state 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 drivenPumps 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, &amp;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 fixed 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 worked from



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 One set of bearing linings for all bearings, one set of bearing bolts and casing bolts.  
State the principal additional spare gear supplied

The foregoing is a correct description,

Manufacturer.

Dates { During progress of { 16th & 20th December, 1948  
of Survey { work in shops - - }  
while { During erection on { 19th and 23rd March, 1949  
building { board vessel - - - }  
Total No. of visits Four

Dates of Examination of principal parts—Casings 16 Dec.'48 Rotors 16 Dec.'48 Blading 16 Dec.'48 Gearing 16 Dec.'48

Wheel shaft 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 O.H.Steel 115,250 lbs. Identification Mark LR 203 20-12-48

~~Pinion shaft~~ Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength O.H.Steel 100,500 lbs. Identification Mark LR 203 20-12-48

1st Reduction Wheel Shaft, Material and tensile strength O.H.Steel 91,250 lbs. Identification Mark LR 203 20-12-48

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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) The above turbo electric generator sets have been satisfactorily installed on board the vessel, tried out under full working conditions and found in good order.

The amount of Entry Fee ... £ : : When applied for,  
Special ... £ As agreed : 9 Apr. 1949  
Donkey Boiler Fee ... £ : : per F.A.G.  
Travelling Expenses (if any) £ : : When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK APR 27 1949

Assigned See First Entry Report attached



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