

# REPORT ON STEAM TURBINE MACHINERY.

22-SEP-1949

Received at London Office

of writing Report. 23rd Aug. 1949. When handed in at Local Office. 23rd August, 1949. Port of PHILADELPHIA, PA.  
 in Survey held at Chester, Pa. Date, First Survey 1st April, Last Survey 15th June, 1949.  
 g. Book - on the S.S. "RAS AL ARDH" - Sun Hull No. 569 (Number of Visits. Three.)  
 t at Chester, Pa. By whom built Sun S.B. & D.D. Co. Yard No. 569 When built 1949  
 ines made at Fitchburg, Mass. By whom made General Elec. Co. Turb. Engine No. 71563 When made 1948  
 ers made at By whom made Gear Box No. 86343 When made  
 ft Horse Power at Full Power Owners Kupan Transport Co. Generator No. 6806211  
 n. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Port belonging to  
 de for which Vessel is intended Is Electric Light fitted

EAM TURBINE ENGINES, &c.—Description of Engines..... Geared Turbine Generator Set

of Turbines Ahead One ~~Direct coupled,~~  
 Astern ~~Double reduction geared~~ } 10. propelling shafts. No. of primary pinions to each set of reduction gearing  
 Alternating Current Generator 3 phase 60 periods per second } rated 400 Kilowatts 440 Volts at 1200 revolutions per minute;  
 Direct Current Generator }

applying power for driving ~~Propelling Motors, type~~ Auxiliary Machinery and Lighting  
Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

[illegible][illegible]

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"

Pinion Shafts, diameter at bearings External 1st { 3" 2nd { diameter at bottom of pinion teeth { 1st 3.1686" 2nd {

el Shafts, diameter at bearings { 1st..... diameter at wheel shroud, { 1st..... Generator Shaft, diameter at bearings..... 3"  
main 4" { main 4-1/8" Propelling Motor Shaft, diameter at bearings.....

Intermediate Shafts, diameter *as per rule* \_\_\_\_\_ *as fitted* \_\_\_\_\_ Thrust Shaft, diameter at collars *as per rule* \_\_\_\_\_ *as fitted* \_\_\_\_\_ Tube Shaft, diameter *as per rule* \_\_\_\_\_ *as fitted* \_\_\_\_\_

w Shaft, diameter *as per rule* ..... Is the { tube } shaft fitted with a continuous liner { ..... **Bronze Liners, thickness in way of bushes** *as per rule* .....  
                                   *as fitted* ..... { screw } { ..... *as fitted* .....  
                                   *as per rule* .....

mess 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  
 by fusion through the whole thickness of the liner..... If the liner does not fit tightly at the part between the leading and

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

propeller, diameter..... Pitch..... No. of Blades..... State whether Moveable..... Length of Bearing in Stern Bush next to and supporting propeller..... Total Developed Surface..... square feet.....

Can the H.P. or I.P. Turbine exhaust direct to the

No. of Turbines fitted with stern wheels.....  
 (No. and size

Feed Pumps { No. and size.....  
 { How driven.....

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

st Pumps, No. and size..... Lubricating Oil Pumps, including Spare Pump, No. and size.....  
Two independent means arranged for circulating water through the Oil Cooler..... Suctions, connected to both Main Bilge Pumps and 4..... Bilge

s, No. and size:—In Engine and Boiler Room.....

Water Circulating Pump Direct Bilge Suctions, No. and size.....

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes.....  
 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.....

11 Sea Connections fitted direct on the skin of the ship..... Are they fitted with Valves or Cocks.....  
 they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates..... Are the Overboard Disch.....

Are the Blow Off Cocks fitted with a spigot and brass covering plate.....

How are they protected.....

Have they been tested as per rule.....

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.....

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**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?.....  
 { an Auxiliary }

If so, is a report now forwarded?.....

Plans. Are approved plans forwarded herewith for Shafting.....  
 (If not state date of approval)

Main Boilers.....

Auxiliary Boilers.....

Donkey Boilers.....

Superheaters.....

General Pumping Arrangements.....

Oil Fuel Burning Arrangements.....

Spare Gear. State the articles supplied:— One set of bearing linings for all bearings, one set of bearing bolts and casing bolts

The foregoing is a correct description,

Manufacture.....

Dates of Survey while building { During progress of work in shops - - } November 30, December 1, 1948.  
 { During erection on board vessel - - - } April 1, May 23 and 15th June, 1949  
 Total No. of visits Five

Dates of Examination of principal parts—Casings Nov. 30, 1948 Rotors Nov. 30, 1948 Blading Nov. 30, 1948 Gearing Nov. 30, 1948

Wheel shaft Thrust shaft Intermediate shafts Tube shaft Screw shaft

Propeller Stern tube Engine and boiler seatings Engine holding down bolts

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 - 126,000 lbs. Identification Mark LR 201 30-1

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

Pinion shaft, Material and tensile strength O.H. Steel 99,500 lbs. Identification Mark LR 201 30-1

1st Reduction Wheel Shaft, Material and tensile strength O.H. Steel 88,500 lbs. Identification Mark LR 201 30-1

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

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.

Certificate (if required) to be sent to.....  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	£	:	:	When applied for,
Special	£	As agreed	:	18 Jul 1949
Donkey Boiler Fee	£	:	:	per F.A.G.
Travelling Expenses (if any)	£	:	:	When received,
				23 Aug 1949

*W.D. Runkham*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK AUG 31 1949

Assigned See Report attached.



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