

AUXILIARY
REPORT ON STEAM TURBINE MACHINERY.

8313
22-SEP-1949

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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)
 at Chester, Pa. By whom built Sun S.B. & D.D. Co. Yard No. 569 When built 1949
 nes made at Fitchburg, Mass. By whom made General Elec. Co. Turb. No. 71563 When made 1948
 ers made at By whom made Gear 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

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

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

EXPANSION	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.
.....	.440"	19.342"	1									
"	.695"	17.597"	1									
"	1.110"	17.614"	1									
"	1.040"	18.372"	1									
"	1.420"	19.102"	1									
"	2.200"	20.230"	1									

Horse Power at each turbine { H.P. 10,059
 I.P. 1st reduction wheel
 L.P. main shaft 1200
 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 28.5" 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"

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

Generator Shaft, diameter at bearings 3"
 Propelling Motor Shaft, diameter at bearings
 Intermediate Shafts, diameter as per rule Thrust Shaft, diameter at collars as per rule Tube 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 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
 as fitted 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
 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
 appliance fitted at the after end of the tube shaft Length of Bearing in Stern Bush next to and supporting propeller Is an approved Oil Gland
 propeller, diameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet.
 Angle Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or I.P. Turbine exhaust direct to the
 condenser No. of Turbines fitted with astern wheels Feed Pumps No. and size How driven

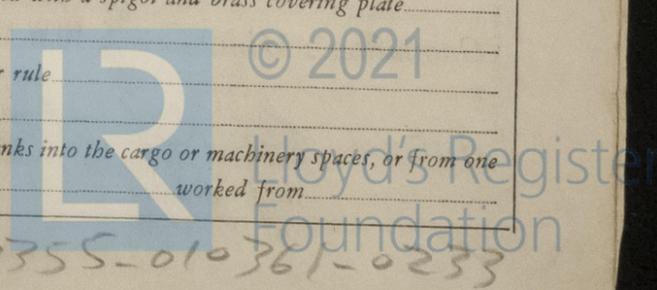
Feed Pumps connected to the Main Bilge Line { No. and size How driven

Oil 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 Auxiliary Bilge
 pumps, No. and size:—In Engine and Boiler Room

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

All 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 Discharges above or below the deep water line
 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
 pipes pass through the bunkers How are they protected
 pipes pass through the deep tanks Have they been tested as per rule

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



010355-010361-0233

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 }

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. 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,.....

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

~~Pinion shaft~~ 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/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. 19 49
Donkey Boiler Fee £ : : per F.A.G.
Travelling Expenses (if any) £ : : When received,
23 Aug. 19 49

J. A. Penham
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK AUG 31 1949

Assigned See Report attached.



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