

645/18 pt. 4a.

Auxiliary
REPORT ON STEAM TURBINE MACHINERY. No. NYK 52229

Received at London Office 16 APR 1953

of writing Report. Mar 6TH 53 When handed in at Local Office. 19 53 Port of NEW YORK.
in Survey held at Quincy, Mass. Date, First Survey. Dec 19TH 52 Last Survey. Mar 4TH 1953
Reg. Book single screw steel steamer "CHRYSSI" (Number of Visits. cont.)
on the Quincy, Mass. Tons {Gross 18,732
Net 11,652

uilt at Quincy, Mass. By whom built Bethlehem Steel Co. Yard No. 1630 When built 1953
Engines made at Trenton N.J. By whom made De Laval Steam Turb. Co. Engine No. 650575/0 When made 1952
ilers made at Carteret, N.J. By whom made Foster Wheeler Corp. Boiler No. 3521+2 When made 1952.
raft Horse Power at Full Power 15,000 Owners Santander Compania Naviera S.A. Port belonging to Panama, R.P.
om. Horse Power as per Rule 3,000 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
ade for which Vessel is intended Tanker

TEAM TURBINE ENGINES, &c.—Description of Engines 400 K.W. A.C. Turbo-generators (Two units)

Ahead One Direct coupled, single reduction geared } to one propelling shafts. No. of primary pinions to each set of reduction gearing one
Astern one double reduction geared }
Direct coupled to { Alternating Current Generator 3 phase 60 periods per second } rated 400 Kilowatts 450 Volts at 1200 revolutions per minute;
supplying power for driving Ships auxiliaries
ed. Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

Manufacturer	U R B I N E	H. P.			I. P.			L. P.			ASTERN.		
	LADING.	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.
ST EXPANSION	ROW	.550	21.106										
ND	"	.890	21.586										
RD	"	.540	23.126										
TH	"	.840	23.736										
ng Jan. 53	"	.540	23.126										
TH	"	.840	23.736										
May 1952	"	1.580	24.226										
TH	"	2.450	24.866										
an. 53.	"	.											
16 TH	"												
TH	"												
TH	"												
TH	"												

662 B1. 662 R.1
aft Horse Power at each turbine { H.P. 5905 reduction wheel 1200
I.P. 5905 main shaft
L.P. 5905

tor Shaft diameter at journals { H.P. 2.495 Pitch Circle Diameter { 1st pinion 5.811 1st reduction wheel 28.593 Width of Face { 1st reduction wheel 6 1/2"
I.P. 2.495 2nd pinion 5 7/8" main wheel
L.P. 2.495 main wheel

tance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 5 7/8" 1st reduction wheel 5.573"
2nd pinion 2 1/2" main wheel

1400 1/2 1/2
xible Pinion { 1st 4.494" Pinion Shafts, diameter at bearings External { 1st 2 1/2" 2nd { diameter at bottom of pinion teeth { 1st 5.378"
2nd 4.494" Internal { 2nd 5.378"

eel Shafts, diameter at bearings { 1st 4.494" diameter at wheel shroud, { 1st 5.378" Generator Shaft, diameter at bearing
main 4.494" main 5.378" Propelling Motor Shaft, diameter at bearings

Yes.
ermediate Shafts, diameter as per rule Thrust Shaft, diameter at collars as per rule Tube Shaft, diameter as per rule
as fitted as fitted as fitted as fitted

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

uilt un
kness 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 as fitted as fitted as fitted

are 900
ic material insoluble in water and non-corrosive If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a
5% over If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland

iber appliance fitted at the after end of the tube shaft Length of Bearing in Stern Bush next to and supporting propeller
reduction peller, diameter. Pitch No. of Blades State whether Moveable Total Developed Surface square feet.

ted and
ngle 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

s 4" dia;
denser No. of Turbines fitted with astern wheels Feed Pumps { No. and size
How driven

38-2.)
ps connected to the Main Bilge Line { No. and size
How driven

ast 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

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

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

es, 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

t pipes pass through the bunkers How are they protected

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

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

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Is a Report on Main Boilers now forwarded?

If so, is a report now forwarded?

Is { a Donkey } Boiler fitted?

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:—

The foregoing is a correct description,

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

please see ^{PHILA} N.Y.K. report No. 9853.
continuous.

Dates of Examination of principal parts—Casings.....

Rotors.....

Blading.....

Gearing.....

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.....

Identification Mark.....

Rotor shaft, Material and tensile strength.....

Identification Mark.....

Flexible Pinion Shaft, Material and tensile strength.....

Identification Mark.....

Pinion shaft, Material and tensile strength.....

Identification Mark.....

1st Reduction Wheel Shaft, Material and tensile strength.....

Lloyd's No.s 2796 & 2799.

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..... Feb. 20th 1953.

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 turbo generator's have been built under special survey, in accordance with approved plans and examined during installation on vessel, examined under working conditions and found to be satisfactory.

In my opinion these turbo-generator's are suitable to be included with the machinery of vessel classed with Lloyd's Register of Shipping.

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 £

Special £

Donkey Boiler Fee £

Travelling Expenses (if any) £

When applied for,

19

When received,

19

Committee's Minute.....

NEW YORK MAR 25 1953

Assigned.....

See attached 1st Entry Report

W. P. Whelsh.

Engineer Surveyor to Lloyd's Register of Shipping.



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