

Rpt. 4a.

REPORT ON STEAM TURBINE MACHINERY.

No. 9806

Received at London Office

Date of writing Report 3/12/32 When handed in at Local Office 15/12/32 Port of TRIESTE

No. in Survey held at TRIESTE Date, First Survey 1/8/1930 Last Survey 30/11/1932

Reg. Book 60412 on the QUAD. S. T/S. CONTE DI SAVOIA (Number of Visits 578) Gross 48502 Tons Net 25948

Built at TRIESTE By whom built CANT. R. DELL'ADRIATICO Yard No. 783 When built 1932

Engines made at TRIESTE By whom made CANT. RIUNITI DELL'AD. Engine No. 119/130 When made 1932

Boilers made at TRIESTE By whom made CANT. R. DELL'ADRIATICO Boiler No. 1505/14 When made 1932

Horse Power at Full Power 124500 Owners ITALIA (FLOTE RIUNITA. COSULICH

Horse Power as per Rule 22506 Is Refrigerating Machinery fitted for cargo purposes YES Is Electric Light fitted YES.

for which Vessel is intended Cruise New York

M TURBINE ENGINES, &c.—Description of Engines 4 SET OF GEARED TURBINE

Turbines Ahead 12 single reduction geared to 4 propelling shafts. No. of primary pinions to each set of reduction gearing 3.

coupled to Alternating Current Generator phase periods per second Direct Current Generator rated Kilowatts Volts at revolutions per minute;

supplying power for driving Propelling Motors, Type

Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to 4 propelling shafts.

BINE	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.
EXPANSION	50.2	612.4	12	74.1	809.2	6	59	1468	2	72.5	1355	2
"	57.2	626.4	12	89.0	838.0	6	70	1490	2	127.1	1454.2	2
"	65.2	642.4	11	113.9	887.8	6	85.9	1521.8	2	266.6	1613.2	2
"	79.2	670.4	12	118.8	927.6	6	92.9	1535.8	1	206.6	1613.2	2
"	92.2	696.4	12	158.8	977.6	6	100.8	1551.6	1	206.6	1613.2	2
"							114.8	1579.6	1			
"							130.7	1611.4	1			
"							148.7	1647.4	1			
"							168.6	1687.2	1			
"							190.6	1731.2	1			
"							215.5	1781.0	1			
"							244.4	1838.8	1			

H.P. 8675 I.P. 277.3 L.P. 1904.6

Horse Power at each turbine M.P. 9800 Revolutions per minute, at full power, of each Turbine Shaft M.P. 2530

L.P. 13400 HOLES-70 H.P.M.P. 190 m/m. 1st reduction wheel 240

H.P. 190 m/m. Pitch Circle 347.80 1st reduction wheel 3656.60 m/m. Face 2 x 680 m/m.

Shaft diameter at journals M.P. 190 m/m. Diameter 429.40 main wheel 823.5 m/m. 1st reduction wheel

L.P. 350 m/m. HOLES-300 H.P.M.P. 825 m/m. main wheel 1865 m/m.

ce between centres of pinion and wheel faces and the centre of the adjacent bearings LP 825 m/m. main wheel 1865 m/m.

1st Pinion 1st diameter 210 LP 280 diameter at bottom of pinion teeth 363.95

2nd Pinion 2nd diameter 80 HOLES 100 HOLES LP 495.40

Shafts, diameter at bearings 1st 560 m/m. diameter at wheel shroud, CONICAL 161.87 AS APPROX

mediate Shafts, diameter as per rule 530 m/m. Thrust Shaft, diameter at collars as fitted 545 m/m. Tube Shaft, diameter as per rule

as fitted 530 m/m. HOLES-360 m/m. as fitted 545 m/m. HOLES-360 m/m. as fitted

Shaft, diameter as per rule 530 m/m. Is the screw shaft fitted with a continuous liner YES Bronze Liners, thickness in way of bushes as per rule 23.5 m/m.

as fitted 14.6 m/m. Is the after end of the liner made watertight in the propeller boss YES If the liner is in more than one length are the junctions

as fitted 33 m/m. fusion through the whole thickness of the liner YES 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 4055/3100 m/m.

ler, diameter 4800 m/m. Pitch 4620 m/m. No. of Blades State whether Movable NO Total Developed Surface 9.09 m square feet.

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

or YES! No. of Turbines fitted with astern wheels 4 Feed Pumps No. and size 6. OF 100TH 2. WIER OF 300TH

connected to the Main Bilge Line No. and size 4 OF 250TH 4 OF 150TH

Pumps, No. and size 2 OF 250TH 2 OF 200TH Lubricating Oil Pumps, including Spare Pump, No. and size 6. OF 110TH

independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size: In Engine and Boiler Room SEE SEPARATE LIST.

Water Circulating Pump Direct Bilge Suctions, No. and size 4 OF 6500TH Independent Power Pump Direct Suctions to the Engine Room

No. and size 4 OF 150 m/m. Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES

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 YES

Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks VALVES

fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Overboard Discharges above or below the deep water line BELOW

each fitted with a Discharge Valve always accessible on the plating of the vessel YES Are the Blow Off Cocks fitted with a spigot and brass covering plate YES

es pass through the bunkers How are they protected

pipes pass through the deep tanks PUMPS DISC PIPE-DECK DRAINING Have they been tested as per rule YES

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

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

partment to another NO Is the Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from DECK-D. & CAPTAIN BRIDGE.

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BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **19100 M² (205594 ft²)**
Is Forced Draft fitted **YES.** No. and Description of Boilers **10 / ARROW WATER TUBE B.** Working Pressure **31**
Is a Report on Main Boilers now forwarded? **YES.**
Is **a Donkey** Boiler fitted? **YES. THREE.** If so, is a report now forwarded? **YES.**
Plans. Are approved plans forwarded herewith for Shafting **6/6/30** Main Boilers **20/3-11/4** Auxiliary Boilers **19/5/1930** Donkey Boilers **12/9, 31/10/19, 29/4/19**
(If not state date of approval)
Superheaters **11/4/1930** General Pumping Arrangements **26/9/30** Oil Fuel Burning Arrangements
Spare Gear. State the articles supplied:— **ALL SPARE GEAR REQUIRED BY THE RULES EXAMINED AND FOUND IN ORDER AND COMPLETE.**
(PLEASE SEE SEPARATE LIST OF RULES AND ADDITIONAL SPARE)

The foregoing is a correct description,

Cantieri Riuniti dell'Adriatico
FABBRICA MACCHINE S. ANDREA

ing. **M. M. M.**

Dates of Survey while building { During progress of work in shops - - - from 1/8/30 to 30/11/1932
During erection on board vessel - - - 508
Total No. of visits } Please see separate list.

Dates of Examination of principal parts—Casings **9/8/30 to 13/11/31** Rotors **6/8/30 to 5/1/32** Blading **9/10/31 to 6/4/32** Gearing **14/1/32**
Wheel shaft **2/5/30 to 10/11/31** Thrust shaft **5/12/30 to 10/4/32** Intermediate shafts **21/1/31 to 8/10/31** Tube shaft **NONE** Screw shaft **20/8/32**
Propeller **25/10/32** Stern tube **4/5/31 to 8/10/31** Engine and boiler seatings **27/5/31 to 29/9/31** Engine holding down bolts **29/9/31**
Completion of pumping arrangements **20/8/1932** Boilers fired **29/9/1931** Engines tried under steam **22/9/32 to 1/10/32**
Main boiler safety valves adjusted **25, 26/11/1932** Thickness of adjusting washers **SEE SKETCH OF ENGL. BOIL. GENER. APP.**
Rotor shaft, Material and tensile strength **S. M. S. 53.5 ~ 60 kg/cm² 23% ELONG.** Identification Mark **SEE**
Flexible Pinion Shaft, Material and tensile strength Identification Mark **—**
Pinion shaft, Material and tensile strength **S. M. S. (NICKEL-STEEL) 63 ~ 71 kg/cm² 22% MIN.** Identification Mark **TESTING**
~~Reduction~~ Wheel Shaft, Material and tensile strength **S. M. S. 63 ~ 71 kg/cm² 22% MIN.** Identification Mark **TESTING**
Wheel shaft, Material **S. M. S.** Identification Mark **SEE TESTING** Thrust shaft, Material **S. M. S.** Identification Mark **TESTING**
Intermediate shafts, Material **S. M. S.** Identification Marks **CERTIFICATE** Tube shaft, Material **—** Identification Marks **—**
Screw shaft, Material **S. M. S.** Identification Marks **—** Steam Pipes, Material **STEEL** Test pressure **95 kg/cm²**
Date of test **FROM 22/3/1932 to 30/8/1932.** Is an installation fitted for burning oil fuel **YES**
Is the flash point of the oil to be used over 150°F. **YES.** Have the requirements of the Rules for the use of oil as fuel been complied with **YES**
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo **NO** If so, have the requirements of the Rules been complied with **—**
Is this machinery a duplicate of a previous case **NO** If so, state name of vessel **—**

General Remarks (State quality of workmanship, opinions as to class, &c.) **The machinery of this vessel has been constructed under special Survey in accordance with the Secretary Letter, approved plans and Rules Requirements. The material and workmanship are good. The machinery was tried under full working conditions and found satisfactory in every respect, after the trial all working parts (Shafting, Turbine, condenser, Boiler and auxiliary) examined and found in order. In Opinion is eligible to have the notation of + L.M.C. - 11.32.**

The amount of Entry Fee ... **£ 555.-** When applied for, **26/11/1932**
Special Donkey Boiler Fee ... **70.790.-** When received, **15/12/1932**
Travelling Expenses (if any) ... **£ 7206.-**
Sub total for ... **£ 8120.-**

Committee's Minute **FRI 23 DEC 1932**

FRI. 27 JAN '33

Assigned **+ L.M.C. 11.32**

Fitted for oil fuel 11.32 F.P. above 150°F

LR-FAF-TB 14-73

F.D. C.L.

CERTIFICATE WRITTEN.

See also ...
1933