

Report on Steam Turbine Machinery. No. 23297

Reporting Report 19th May, 19 58 When handed in at Local Office 26/5 19 58 Port of GENOA Received at London Office 12 JUN 1958
 Survey held at GENOA Date, First Survey 13/9/56 Last Survey 12/5/ 19 58
 (Number of Visits 105)

on the ~~Trip~~ ~~Trip~~ ~~Quadruple~~ Screw Vessel "MIRADOR" Tons { Gross 21020
 Net -
 GENOA-SESTRI By whom built S.A. ANSALDO-CANTIERI NAVALI Yard No. 1522 When built 1958
 made at GENOA-SAMPIERDARENA By whom made S.A. ANSALDO-STABILIMENTO Engine No. 1603 When made 1958
 made at ditto By whom made ditto MECCANICO Boiler No. 6151 When made 1957
 se Power { Maximum 16000 @ 114 R.p.m. Owners "MIRADOR" Cia Nav. Panamena S.p.A. Port belonging to PANAMA R.P.
 Service 14500 @ 110 R.p.m.
 er Rule 3200 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 which Vessel is intended Carrying Petroleum in Bulk.

TURBINE ENGINES, &c.—Description of Engines Two steam turbines—double reduction geared to one propeller shaft.

Ahead Two ~~Double Reduction~~ to One propelling shafts. No. of primary pinions to each set of reduction gearing Two
 Astern One ~~Double Reduction~~ double reduction geared
 ed to { Alternating Current Generator — phase — periods per second } rated — Kilowatts — Volts at — revolutions per minute;
 Direct Current Generator }
 ing power for driving — Propelling Motors, Type —
 Kilowatts — Volts at — revolutions per minute. Direct coupled, single or double reduction geared to — propelling shafts.

H. P.	I. P.	L. P.	ASTERN.
One impulse wheel with one row of blades	-	-	Two impulse wheels with two rows of blades each.
Three	-	Double flow	-
7 - 8 - 9	-	16 rows in each flow	-

Power at each turbine { H.P. 7760
 I.P. -
 L.P. 8240 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. 5232 1st reduction wheel 953.2
 I.P. -
 L.P. 3449.35 main shaft 114
 diameter at journals { H.P. 125 mm. Pitch Circle { 1st pinion HP 283,540 mm. 1st reduction wheel 1556,456 mm.
 I.P. - Diameter { 2nd pinion LP 380,06 mm. 1st reduction wheel 1375,47 mm. Width of { 1st reduction wheel 2 x 290 mm.
 L.P. 225 mm. 2nd pinion 492,8946 main wheel 4120,922 mm. Face { main wheel 2 x 490 mm.
 between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion HP 465 mm. 1st reduction wheel { HP & 510 mm.
 LP 470 mm. main wheel 980 mm.
 HP 150 mm. in body
 1st 230 mm. at coupling Pinion Shafts, diameter at bearings External 1st { HP 170 mm. 370 mm. with 1st { HP 269,070 mm.
 LP 230 mm. in body Internal 1st { LP 200 mm. 2nd { 241 mm. diameter at bottom of pinion teeth { LP 365,595 mm.
 2nd 472,639 mm.
 s, diameter at bearings { 1st 240 mm. Wheel rim { 1st Welded Generator Shaft, diameter at bearings -
 main 580 mm. diameter at wheel and shaft { main Welded Propelling Motor Shaft, diameter at bearings -
 e Shafts, diameter as per rule as approved Thrust Shaft, diameter at collars as per rule as approved
 as fitted 496 mm. as fitted 480 mm.
 diameter as per rule as approved Is the { ~~trip~~ screw } shaft fitted with a continuous liner { yes
 as fitted - as fitted 565 mm. { screw }
 rs, thickness in way of bushes as per rule as approved as fitted 21.5 mm. Is the after end of the liner made watertight in the
 as fitted 27.5 mm. Thickness between bushes as fitted 21.5 mm.
 yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yes
 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 -
 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
 If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 2570 mm.
 diameter 6300 mm. Pitch 5185 mm. No. of Blades Four State whether Moveable Solid Total Developed Surface 16.4 square feet
 ew, are arrangements made so that steam can be led direct to the L.P. Turbine yes Can the H.P. & L.P. Turbines exhaust direct to the
 Yes No. of Turbines fitted with astern wheels One Feed Pumps { No. and size 3 @ 85 tons/hr.
 How driven steam turbine driven
 cted to the Main Bilge Line { No. and size 2 @ 100 tons/hr = 1 @ 40 tons/hr. In fwd pump room : 1 @ 100 tons/hr.
 How driven E.D. Steam driven Steam driven.
 ps, No. and size { 1 @ 100 tons/hr. in ER (ED) Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 126 tons/hr. = ED
 1 @ 100 tons/hr. in Fwd pump room.
 pendent means arranged for circulating water through the Oil Cooler yes. Branch Bilge Suctions, No. and size:—In Engine
 oms 2 @ 150mm. 4 @ 100mm. 2 @ 80mm. diam. In Pump Room Fwd = 1 @ 175mm. 2 @ 80mm.
 Cargo pump room = 1 @ 100mm. and 2 @ 80mm. diam.
 Circulating Pump Direct Bilge Suctions, No. and size 1 @ 500 mm. Direct Bilge Suctions to the Engine and Boiler Room
 nd size 2 @ 150mm. Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes
 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
 Connections fitted direct on the skin of the ship on stools welded to shell plating Are they fitted with Valves or Cocks valves and cocks.
 d 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
 Are they 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
 te yes What pipes pass through the bunkers - How are they protected -
 pass through the deep tanks - Have they been tested as per rule -
 s, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 ment 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
 one compartment to another yes Is the Shaft Tunnel watertight - Is it fitted with a watertight door No worked from -
 &c.—Total Heating Surface of Boilers (as per Rules) 2418 sq.m² 26,027.5 842°F 16740
 draught fitted yes No. and Description of Boilers Two-two drum Foster Wheeler Working Pressure 47 Kg/cm²
 on Main Boilers now forwarded? yes.

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes.

State the principal additional spare gear supplied One Screw Shaft - Continuous Bronze liner.

The foregoing is a correct description.		X	10/12/57	10/12/57
Dates	During progress of work in shops -	From 13/9/56	To 30/12/57	

Wheel shaft. 27/9/57 Thrust shaft. 27/9/57 Intermediate shafts. 1/4/58 Tube shaft. - Screw shaft. 30/1/58
 Propeller. 17/3/58 Stern tube. 12/11/57 Engine and boiler seatings. 7/1/1958 Engine holding down bolts. 5/3/58

Pinion shaft, Material and tensile strength Ni Cr.Mo steel U.T.S. 85/95 Kg/mm² Y.P. ≥ 65 Kg/mm² Identification Mark ditto

1st Reduction Wheel Shaft, Material and tensile strength S.M. Steel 47-55 Kg/mm² See separate sheet
 Wheel shaft, Material S.M. steel Identification Marks S.M. Steel Identification Marks separate sheet
 Thrust shaft, Material S.M. Steel Identification Marks separate sheet
 Intermediate shafts, Material 48/54 Kg/mm² Identification Marks ditto Tube shaft, Material - Identification Marks -
 Cr.Mo steel for

Is the flash point of the oil to be used over 100 °F.

Full description of Fire Extinguishing Apparatus fitted in machinery spaces. see separate sheet.

Is the vessel ~~not being used as a tanker~~ fitted for carrying oil as cargo. yes 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..... No..... If so, state name of vessel.....
The machinery of this vessel has been constructed in accordance with the provisions of class &c.....

General Remarks. (State quality of workmanship, opinions as to class, etc.)
special survey of tested materials and is in accordance with the approved plans, Secretary's Letters and
Requirements. The materials and workmanship are good. The complete installation has been tried under work

at full power and found satisfactory. Afterward the fabricated LP turbine casing, gear case and gear specially examined and found as far as could be seen sound and free from defects. The vessel is worthy to be entered in the Society's Register Book with the records : + LMC 5.58 CL and notation "Fitted for oil fuel F.P.

"Two steam turbines D.R. geared to propeller shaft ". The vessel is fitted with a L.P. steam/ steam ge
has been examined under steam and its safety valves adjusted as stated on the attached sheet and an acc

test satisfactorily carried out.

EE FEE DURING CONSTRUCTION: 41,583,000 =
FOR AIRCRAFT WEIGHT PARTS: 41,62,500 =
 1/12.5% 12.5% 12.5% ✓

= \$1,047.00 = net inv.
 CAN FUNG
 TRAV & OFFICE EXP
 REV TAX.

24 1047.00
 24 2172.00
 24 1904.20

12/1/58

The amount of Entry Fee 441.54 INITIALISATION
 Special 10.15% 441.54 404.500
 When applied for 3/6/19.04
 (A. Grasselli & S. Follo).
 Engineer Surveyor to Lloyd's Register of Shipping

Donkey Boiler Fee ... £ ... : ... : When received.
Travelling Expenses (if any) £ *See Rpt 1* 19
Committee's Minute FRIDAY 4 JUL 1958

Assigned See Rpt. 1.

IDENTIFICATION MARKS "MIRADOR" ANSALDO No. 1522

TURBINE ROTOR	✓ LLOYD'S GEN S 5682 AG 19/9/57	After Section	LLOYD'S GEN 2833 ✓ AG 21/9/57
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LLOYD'S GEN 9237

	RIM	S 5340	AG 16/9/57
1st Red. Gear		AG 19/9/57	
Wheel		LLOYD'S GEN	LLOYD'S GEN
		281	281

	LLOYD'S GEN	LLOYD'S GEN
1. Quill shaft	S 5695	S 5705
5	✓ AG 16/9/57	✓ AG 5/9/57

AG 30/9/57

Main Gear Wheel	} SHAFT	LLOYD'S GEN 283 AG 27/9/57
		LLOYD'S GEN

Intermediate shaft

Screw Shaft ✓ 2186 SF 16/4/57

Bronze Propeller

LLOYD'S GEN
N 3385

WG 16/4/58

水. 辛.

_____ R Lloyd

20m.6.55. T. (MADE AND PRINTED IN ENGLAND.)

ANSALDO YARD No. 1522

S/S "MIRADOR"

Fire extinguishing arrangements.

in engine room :

5 S.W. hydrants with 65 mm. hoses.

7 a) 9 liters froth extinguishers.

2 a) 4 Kgs CO₂ extinguishers.

1 a) 136 liters froth extinguishers.

Fixed full flooding CO₂ system installation and steam smothering installation both operated from outside the E.R.-

One box of sand and scoop.

In the boiler room :

2 S.W. hydrants with 65 mm. hoses.

1 a) 45 liters froth extinguishers.

1 a) 136 " " "

1 a) 9 " " "

Fixed full flooding CO₂ system installation and steam smothering installation both operated from outside.

Two boxes of sand and scoops.

Forward pump room :

1 S.W. hydrant with 65 mm. hose.

2 a) 90 liters froth extinguishers.

Fixed steam smothering installation operated from deck.

After cargo pump room :

2 a) 9 liters froth extinguishers (entrances)

1 a) 9 " " " (lower).

1 a) 45 " " "

Fixed steam smothering installation operated from outside.

Thickness of adjusting washers of safety valves of main boilers.

Port Boiler =	Saturated steam	8.6 mm.	Superh _{td} steam :	8.1 mm.
Starboard Boiler =	" "	9.4 mm.	" "	: 7.4 mm.

of L.P. Steam Generator

Combustible steam : 25 Kg/cm²

Reduced steam : 9.5 " " Fwd 18 mm. Aft. 20 mm.

[Handwritten signature]