

Report on Steam Turbine Machinery. No. 19286

a. Writing Report 25-4-53 19 When handed in at Local Office 29/4/1953 Port of GENOVA Received at London Office 8 MAY 1953
 Survey held at GENOVA Date, First Survey 25-8-52 Last Survey 13-4-53 19
 Book on the TANKER MIRELLA D'AMICO (Number of Visits 29)
 on the MESSRS. CANTIERI RIUNITI DELL'ADRIATICO YARD N° 1775 Tons {Gross Net
 at MONFALCONE By whom built CANTIERI RIUNITI DELL'ADRIATICO Yard No. 1775 When built 1953
 made at GENOVA-SAMPIERDARENA By whom made S.A. ANSALDO-STABIL. MECCAN. Engine No. When made 1953
 rs made at By whom made Boiler No. When made
 Horse Power at Full Power 14000 @ 105 RPM Port belonging to
 Horse Power as per Rule 2800 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 le for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines THREE STEAM TURBINES D.R. GEARED TO PROPELLING SHAFT.
 of Turbines Ahead THREE Direct coupled, single reduction geared to ONE propelling shafts. No. of primary pinions to each set of reduction gearing THREE
 Astern TWO double reduction geared
 coupled to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute;
 applying power for driving Propelling Motors, Type
 Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

TURBINE DESIGN.	H. P.	I. P.	L. P.	ASTERN.
No. of rows <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
No. of stages <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
No. of rows in each stage <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Horse Power at each turbine { H.P. 4580 I.P. 4710 L.P. 4710 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. 4881 I.P. 4881 L.P. 2972 }
 Shaft diameter at journals { H.P. I.P. L.P. } Pitch Circle Diameter { 1st pinion 440.78 2nd pinion 476.54 } 1st reduction wheel 1376.74 main wheel 4027.74 } Width of Face { 1st reduction wheel 2 x 280 main wheel 2 x 508 }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 454.5 2nd pinion 439 } 1st reduction wheel 523.5 main wheel 883.5 } diameter at bottom of pinion teeth { 1st 350 2nd 258 }

Pinion Shafts, diameter at bearings { 1st 255 main 600 } diameter at wheel shroud, { 1st 1250 main 3888 } Generator Shaft, diameter at bearings
 Propelling Motor Shaft, diameter at bearings
 Thrust Shaft, diameter at collars as per rule as fitted

Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted Is the { tube screw } shaft fitted with a continuous liner { }

Liners, thickness in way of bushes as per rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the hull boss If the liner is in more than one length are the junctions made 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 plastic material insoluble in water and non-corrosive
 If so, state type Is an approved Oil Gland or other appliance fitted at the after end of the tube
 Length of Bearing in Stern Bush next to and supporting propeller
 Propeller, diameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet.

Are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or I.P. Turbines exhaust direct to the user
 No. of Turbines fitted with astern wheels Feed Pumps { No. and size How driven }
 s connected to the Main Bilge Line { No. and size How driven }

Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size
 Independent means arranged for circulating water through the Oil Cooler Suctions, connected both to Main Bilge Pumps and Auxiliary Pumps, No. and size:—In Engine and Boiler Room In Pump 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

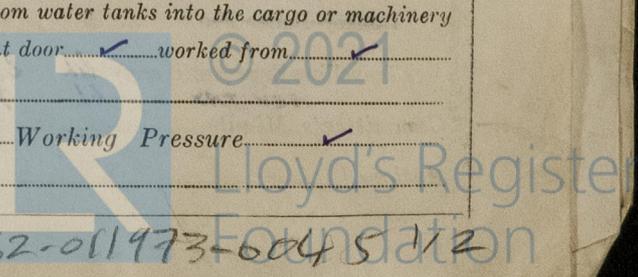
Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges
 Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges above or below the deep water

Are 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 plug plate What pipes pass through the bunkers How are they protected
 pipes pass through the deep tanks Have they been tested as per rule

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 or from one compartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers
 Forced Draft fitted No. and Description of Boilers Working Pressure
 Report on Main Boilers now forwarded?

JM
 22/6/53



011962-011973-6045712

4.A. 19286.

Is ^{a Donkey} { an Auxiliary } Boiler fitted? If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only?

Plans. Are approved plans forwarded herewith for ^{REDUCTION GEARING 29-4-53} ~~22-3-53~~ Main Boilers. Auxiliary Boilers. Donkey Boilers.
(If not, state date of approval)

Superheaters. General Pumping Arrangements. Oil Fuel Burning Arrangements.

Geared turbines situated aft. Have torsional vibration characteristics of system been approved. YES Date of approval. 5-9-53

SPARE GEAR.

Has the spare gear required by the Rules been supplied?

State the principal additional spare gear supplied.

ANSALDO S. A.
STABILIMENTO MECCANICO
Via Condottiere

The foregoing is a correct description, _____ Manu

Dates of Survey while building

During progress of work in shops - -	FROM 25-8-52 TO 12-4-53
During erection on board vessel - -	<input checked="" type="checkbox"/>
Total No. of visits.	29

Dates of Examination of principal parts

Casings	<input checked="" type="checkbox"/>	Rotors	<input checked="" type="checkbox"/>	Blading	<input checked="" type="checkbox"/>	Gearing	FROM 29- TO 2-4-53
Wheel shaft	26-2-53	Thrust shaft	<input checked="" type="checkbox"/>	Intermediate shafts	<input checked="" type="checkbox"/>	Tube shaft	<input checked="" type="checkbox"/>
Propeller	<input checked="" type="checkbox"/>	Stern tube	<input checked="" type="checkbox"/>	Engine and boiler seatings	<input checked="" type="checkbox"/>	Engine holding down bolts	<input checked="" type="checkbox"/>
Completion of fitting sea connections	<input checked="" type="checkbox"/>	Completion of pumping arrangements	<input checked="" type="checkbox"/>	Boilers fixed	<input checked="" type="checkbox"/>	Engines tried under steam	<input checked="" type="checkbox"/>
Main boiler safety valves adjusted	<input checked="" type="checkbox"/>	Thickness of adjusting washers	<input checked="" type="checkbox"/>				

Rotor shaft, Material and tensile strength Identification Mark

Quill Shaft, Material and tensile strength S.M. STEEL - 49 Kg/mm² Identification Mark SEE ATTACHED S

Pinion shaft, Material and tensile strength NICKEL STEEL - ≥ 63 Kg/mm² Identification Mark SEE ATTACHED S

Chemical analysis C: 0.24/0.35 - Ni: 3.25/3.75 - P x S: ≤ 0.035

If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment

1st Reduction Wheel Shaft, Material and tensile strength S.M. STEEL - 49 Kg/mm² Identification Mark: SEE ATTACHED S

Wheel shaft, Material S.M. STEEL Identification Mark SEE ATTAC. SHEET 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

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

General Remarks. (State quality of workmanship, opinions as to class, &c.) THIS REDUCTION GEARING SET HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IS IN ACCORDANCE WITH APPROVED PLANS, SECRETARY'S LETTERS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE GOOD. THE WELDING OF THE FABRICATED GEAR CASE IS SATISFACTORY. THE CASE HAS BEEN EFFICIENTLY HEAT TREATED ON COMPLETION OF WELDING.

THIS REDUCTION GEARING SET HAS NOW BEEN DESPATCHED TO MONFALCONE TO BE FITTED ON BOARD THE MESSAS C.R.D.A. YARD N° 2775.

WHEN THE MACHINERY OF THIS VESSEL HAS BEEN INSTALLED AND TRIED AT FULL POWER THE SATISFACTION OF THE TRIESTE'S SURVEYORS, THE GEAR CASE SPECIALLY EXAMINED ON COMPLETION OF A FULL POWER TRIALS AND FOUND SOUND AND FREE FROM DEFECTS, TORSIOGRAPH RECORDS TAKEN FROM THE COMPLETE SHAFING INSTALLATION FOR THE PURPOSE OF DETERMINING WHETHER RESTRICTED RANGE(S) OF REVOLUTIONS ARE REQUIRED, THE VESSEL WILL BE ELIGIBLE TO BE CLASSED IN THE REGISTER BOOK WITH THE NOTATION: L.M.C. (WITH DATE) - "STEAM TURBINES D. R. GEARED TO PROPELLER SHAFT."

N.B. COPY OF THIS REPORT HAS BEEN FORWARDED TO TRIESTE SUR

The amount of Entry Fee £ 212.44 = When applied for

Special CAN EVNO ... £ 4.248 = 4/7/1953

Donkey Boiler Fee ... £ ... When received

Travelling Expenses (if any) £ 27.61 = 19

REV. TAX - 6/1

The Committee's Minute TUESDAY 7.3.54

Assigned See Rpt. 4a

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping.

4.A.

Rpt. 9a
Port of GENOA. Continuation of Report No. 19286 dated 25/4/53 on the MESSAS C.R.D.A. YARD N° 2775.

- IDENTIFICATION MARKS -
- REDUCTION GEARING SET -

	H.P. TURBINE	I.P. TURBINE	L.P. TURBINE
1st RED. PINION SHAFT.	LLOYD'S 144576 A.G. 2-4-53	LLOYD'S 14594 A.G. 2-4-53	LLOYD'S 14593 A.G. 2-4-53
1st RED. GEAR WHEEL SHAFT	LLOYD'S 3.2196 A.G. 29-1-53	LLOYD'S 3.2197 A.G. 29-1-53	LLOYD'S 3.2198 A.G. 9-2-53
1st RED. GEAR WHEEL RIM.	LLOYD'S 3.2197 A.G. 29-1-53	LLOYD'S 3.2196 A.G. 29-1-53	LLOYD'S 3.2198 A.G. 9-2-53
2nd RED. QUILL SHAFT	LLOYD'S 3.2197 A.G. 31-3-53	LLOYD'S 3.2196 A.G. 31-3-53	LLOYD'S 3.2198 A.G. 31-3-53
2nd RED. PINION SHAFT	LLOYD'S 3.2197 A.G. 31-3-53	LLOYD'S 3.2196 A.G. 31-3-53	LLOYD'S 3.2198 A.G. 31-3-53
MAIN GEAR WHEEL SHAFT.		LLOYD'S 3.2220 A.G. 26-2-53	
MAIN GEAR WHEEL RIM.		LLOYD'S 1434 A.G. 26-2-53	

[Signature]

