

Report on Steam Turbine Machinery.

No. 11,834

Rpt. 4a.

Date of writing Report 31 October 1985 When handed in at Local Office 11 Nov 85 Port of Marseille Received at London Office 16 Nov 1985
 No. in Survey held at La Seyne sur mer and La Ciotat Date, First Survey 30 October 1982 Last Survey 8 April 1985
 Reg. Book 4037 on the Single Screw Vessel "IPHIGENIA" Tons (Gross) 12833 Net 7287
 Built at La Ciotat By whom built Chantiers de la Ciotat Yard No. 175 When built 1985
 Engines made at La Seyne sur mer By whom made F. & Ch. de la Mediterranee Engine No. 94 When made 1985
 Boilers made at La Ciotat By whom made Societe Babcock Wilcox Boiler No. 10714-1 When made 1985
 Shaft Horse Power { Maximum 8.250 Owners Societe Shell Distribution Port belonging to HAIRE
 { Service 7.500
 M.N. as per Rule 1.650 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 Trade for which Vessel is intended Carrying Petroleum in Bulk

STEAM TURBINE ENGINES, &c.—Description of Engines Directly reversible geared Turbines
 No. of Turbines 2 Direct coupled, single reduction geared to 1 propelling shafts. No. of primary pinions to each set of reduction gearing 2
 { Ahead 2 { Direct coupled, single reduction geared
 { Astern 2 { double reduction geared
 direct coupled to { Alternating Current Generator ✓ phase ✓ periods per second ✓ rated ✓ Kilowatts ✓ Volts at ✓ revolutions per minute;
 { Direct Current Generator ✓
 for supplying power for driving ✓ Propelling Motors, Type ✓
 rated ✓ Kilowatts ✓ Volts at ✓ revolutions per minute. Direct coupled, single or double reduction geared to ✓ propelling shafts.

TURBINE BLADING.	H. P.	I. P.	L. P.	ASTERN.
Impulse Blading { No. of rows <u>2</u>				
{ No. of stages <u>21</u>				
Reaction Blading { No. of rows in each stage <u>1</u>				

Shaft Horse Power at each turbine { H.P. 4145 I.P. 1077 L.P. 501.6 revolutions per minute, at full power, of each Turbine Shaft { H.P. 4145 I.P. 1077 L.P. 501.6
 Rotor Shaft diameter at journals { H.P. 16.65 I.P. 20.65 L.P. 20.65 Pitch Circle Diameter { 1st pinion 137 2nd pinion 137 1st reduction wheel 137 main wheel 137 1st reduction wheel 137 main wheel 137
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearing { 1st pinion 137 2nd pinion 137 1st reduction wheel 137 main wheel 137
 Flexible Pinion Shafts, diameter at bearings { 1st 137 2nd 137 1st reduction wheel 137 main wheel 137
 Wheel Shafts, diameter at bearings { 1st 137 2nd 137 1st reduction wheel 137 main wheel 137
 Intermediate Shafts, diameter { 1st 137 2nd 137 1st reduction wheel 137 main wheel 137
 Thrust Shaft, diameter at collars { 1st 137 2nd 137 1st reduction wheel 137 main wheel 137

Tube Shaft, diameter { H.P. 16.65 I.P. 20.65 L.P. 20.65 as per rule ✓ as fitted ✓ Screw Shaft, diameter { H.P. 16.65 I.P. 20.65 L.P. 20.65 as per rule ✓ as fitted ✓
 Bronze Liners, thickness in way of bushes { H.P. 22.25 I.P. 23.85 L.P. 23.85 Thickness between bushes { H.P. 22.25 I.P. 23.85 L.P. 23.85 as per rule ✓ as fitted ✓
 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 two liners 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 ✓
 shaft no If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller 1.958
 Propeller, diameter 6.100 Pitch 4.700 No. of Blades 4 State whether Moveable no Total Developed Surface 13.15 square feet

If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine yes Can the H.P. or I.P. Turbines exhaust direct to the Condenser yes No. of Turbines fitted with astern wheels two Feed Pumps { No. and size one 75 m3h How driven electrically (Bilge) one { 137 m3h electrically (Main Bilge) one { 27 m3h electrically (Auxiliary Bilge)
 Pumps connected to the Main Bilge Line { No. and size one 75 m3h How driven electrically (Bilge) one { 137 m3h electrically (Main Bilge) one { 27 m3h electrically (Auxiliary Bilge)
 Ballast Pumps, No. and size one 75 m3h Lubricating Oil Pumps, including Spare Pump, No. and size 2 - 108/110 m3h
 Are two independent means arranged for circulating water through the Oil Cooler yes Branch Bilge Suctions, No. and size:—In Engine and Boiler Rooms one 90 m3h In Pump Room one 90 m3h and Bilge Pump one 90 m3h
 In Holds, &c. one 90 m3h Main Water Circulating Pump Direct Bilge Suctions, No. and size two 150 m3h Are all the Bilge Suction pipes in Holds and yes Well fitted with strum-boxes yes
 Bilges, No. and size two 150 m3h Are 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 yes
 Are all Sea Connections fitted direct on the skin of the vessel yes Are they fitted with Valves or Cocks yes Are the Blow Off Cocks fitted with a spigot and brass yes
 (except Aux. end.) Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes How are they protected yes
 What pipes pass through the bunkers none Have they been tested as per rule yes
 What pipes pass through the deep tanks none Are all Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 Is 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 compartment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—Total Heating Surface of Boilers 1192.8 M2 (2 Boilers + 1st) Is Forced Draught fitted yes No. and Description of Boilers Two Water tube Spt. Working Pressure 39 kg/cm2
 Is a Report on Main Boilers now forwarded? yes

Is a Donkey Boiler fitted? Steam Generator If so, is a report now forwarded? Abt C. 2887 copy herewith
Is the donkey boiler intended to be used for domestic purposes only? now essential purposes only.
Plans. Are approved plans forwarded herewith for Shafting. 13-4-53 Main Boilers. 20-3-53 Auxiliary Boilers. ✓ Donkey Boilers. ✓
(If not, state date of approval)
Superheaters. 9-4-50 General Pumping Arrangements. 25-1-50 Oil Fuel Burning Arrangements. 1-4-50
Geared turbines situated aft. Have torsional vibration characteristics of system been approved? yes Date of approval 26-4-50

SPARE GEAR. 18/3/54 103 max 100 min RPM
Has the spare gear required by the Rules been supplied? yes, for HP and Astern turbines
State the principal additional spare gear supplied. main governor steam valve

for FORGES ET CHANTIERS DE LA MEDITERRANEE :
LA SEYNE S/MER

for CHANTIERS NAVALS DE LA CIOTAT :
LA CIOTAT

The foregoing is a correct description.

Dates of Survey while building
During progress of work in shops - - - at La Seyne : 19-1-54; 6-2-54; 18-2-54; 11-2-5-54; 13-5-54; 22-7-54; 2-8-54; 19-10-54.
During erection on board vessel - - - at La Ciotat : 6-2-54; 11-6-54; 15-6-54; 16-29-7-54; 6-8-54; 16-30-9-54; 8-10-19-10-54.
Total No. of visits in the shops : 8 on board : 44 total : 52
Dates of Examination of principal parts - Casings 2-8-54 (HP) Rotors 13-5-54 Blading (HP) 19-10-54 Gearing 22-7-54
Wheel shaft 22-7-54 Thrust shaft 22-7-54 Intermediate shafts 28-5-54 Tube shaft 28-5-54 Screw shaft 28-5-54
Propeller 6-5-54 Stern tube 6-5-54 Engine and boiler seatings 28-5-54 Engine holding down bolts 29-7-54
Completion of fitting sea connections 6-5-54 Completion of pumping arrangements 16-3-55 Boilers fired 16-3-55 Engines tried under steam 16-3-55
Main boiler safety valves adjusted 16-2-55 Thickness of adjusting washers 30-9-54 Post: fwd 22.0 aft 22.3 24-2-55
Rotor shaft, Material and tensile strength HP Rotor shaft 55.3 30-9-54 Post: fwd 19.0 aft 22.0 24-2-55
Flexible Pinion Shaft, Material and tensile strength Steel Drive 56.4 30-9-54 Post: fwd 19.0 aft 22.0 24-2-55
Pinion shaft, Material and tensile strength HP Pinion shaft 55.3 30-9-54 Post: fwd 19.0 aft 22.0 24-2-55
Identification Mark 1753 ASM
Identification Mark 1755 ASM
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 Identification Mark
Wheel shaft, Material Identification Mark Thrust shaft, Material Identification Mark
Intermediate shafts, Material SM Steel Identification Marks VLN 670 1671 Tube shaft, Material Identification Marks
Screw shaft, Material SM Steel Identification Marks VLN 712 713 Steam Pipes, Material Spec. Steel (CROMESCO) Test pressure 96 KGS/CM²
Date of tests 14/10/54, 19/10/54, 3-12-54, 11-5-54, 1-7-15-23-30/12/54. 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
Full description of Fire Extinguishing Apparatus fitted in machinery spaces. oil tanker so, have the requirements of the Rules been complied with?
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. oil tanker 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 machinery has been constructed and installed under special survey in accordance with the Rules, the approved plans and the Secretary's letters. The materials and workmanship are good. The machinery was examined under full working conditions during sea trials with satisfactory results and is eligible, in my opinion, for classification with the following records:

LMC 4/55 CL
fitted for oil fuel 4/55 FP above 150 f°

Engineer Surveyor to Lloyd's Register of Shipping.



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Certificate (if required) to be sent to Committee's Minute.

Building at La Seyne 142 000
The amount of Entry Fee
Creation at La Ciotat 260 000
Special 15 000
Steam Generator Fee
Donkey Boiler Fee
at before 1st SC
Travelling Expenses (if any)
When applied for:
(1) 9-12-54
(2) 16-5-55
When received:
(1) 5-2-55
(2) 11-7-55

Committee's Minute

Assigned 7 LMC 4-55
2 WTB 570 th. O.F. 4-77. Ch.