

OM ACCTS. 21/2
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 Date of writing Report 28.1.1961
 No. in Survey held at Dunkirk
 Reg. No. 21/2

Report on Steam Turbine Machinery.

No. R.E. 35

Received at London Office

When handed in at Local Office 19 Port of ROUEN
 Date, First Survey 5.3.59 Last Survey 6.11.1960
 (Number of Visits 58)
 on the Twin x Triple Screw Vessel "J. PAUL GETTY"
 Tons (Gross 40906 Net 25214)
 Built at Dunkirk By whom built At. & Ch. de France Yard No. 228 When built 1960-11
 Engines made at Saint-Nazaire By whom made Ch. de l'Atlantique Engine No. T.18 When made 1959-9
 Boilers made at Dunkirk By whom made At. & Ch. de France Boiler No. 9 & 10 When made 1960-11
 Shaft Horse Power { Maximum 24000 Owners Hemisphere Transportation Corpn. Port belonging to Monrovia
 M.N. as per Rule { Service 4800 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended International tanker

STEAM TURBINE ENGINES, &c.—Description of Engines Double reduction geared steam turbine (Parson)

No. of Turbines 2 Ahead 2 Direct coupled, single reduction geared to 1 propelling shafts. No. of primary pinions to each set of reduction gearing 2
 direct coupled to { Alternating Current Generator phase periods per second
 for supplying power for driving { Direct Current Generator rated Kilowatts Volts at revolutions per minute;
 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				
Reaction Blading { No. of stages				
Reaction Blading { No. of rows in each stage				

Shaft Horse Power at each turbine { H.P. I.P. L.P. Revolutions per minute, at full power, of each Turbine Shaft { H.P. 1st reduction wheel I.P. main shaft L.P. 102 RPM
 Rotor Shaft diameter at journals { H.P. I.P. L.P. Pitch Circle Diameter { 1st pinion 1st reduction wheel 2nd pinion main wheel Width of Face { 1st reduction wheel main wheel
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 1st reduction wheel 2nd pinion main wheel
 Flexible Pinion Shafts, diameter { 1st 2nd Pinion Shafts, diameter at bearings { External Internal 1st 2nd diameter at bottom of pinion teeth 1st 2nd
 Wheel Shafts, diameter at bearings { 1st main diameter at wheel shroud, { 1st Generator Shaft, diameter at bearings 2nd Propelling Motor Shaft, diameter at bearings
 Intermediate Shafts, diameter as per rule as fitted 596 m/m Thrust Shaft, diameter at collars as per rule as fitted
 Tube Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted 711 m/m Is the { tube x screw } shaft fitted with a continuous liner { Yes
 Bronze Liners, thickness in way of bushes as per rule as fitted 33 m/m Thickness between bushes as per rule as fitted 28.5 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 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 2750 m/m
 Propeller, diameter 7500 m/m Pitch variable No. of Blades 5 State whether Moveable No Total Developed Surface PD2 (1000 m/m Fwd) 416160 Kgs/m2
 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 2 Feed Pumps { No. and size 3- 133 tons/hr. How driven Steam turbine
 Pumps connected to the Main Bilge Line { No. and size Eng. Room 1- 150 m3/hr, I- 150 m3/hr, L- 50 m3/hr Fwd. Pp. rm. 1- 100 m3/hr How driven steam electric electric
 Ballast Pumps, No. and size Eng. room 1- 150 m3/hr stripping Aft Pp. rm. 1- 102 m3/hr, Fwd. Pp. rm. 1- 100 m3/hr
 Are two independent means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions, No. and size:—In Engine and Boiler Rooms Eng. room 5 port side, 5 starboard 125 m/m Dia., 6- 50 m/m In Pump Room 1- 100 m/m Diameter
 In Holds, &c. Hold 2- 50 m/m D., Chain locker 1- 65 m/m D., Main c/ds. forward & aft each IP, I.S. = 76 m/m D.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 2- 350 m/m D. P. sid Direct Bilge Suctions to the Engine and/or Boiler Room Bilges, No. and size 1 Port 150 m/m D. Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes
 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 ship no & distn. pieces Are they fitted with Valves or Cocks Both
 Are they 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 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 covering plate Yes What pipes pass through the bunkers How are they protected
 What pipes pass through the deep tanks Have they been tested as per rule
 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 Is it fitted with a watertight door worked from

BOILERS, &c.—Total Heating Surface of Boilers 13523 sq. ft. x 2 = 27046 sq. ft.

Is Forced Draught fitted Yes No. and Description of Boilers 2- W.T. Foster Wheeler Working Pressure 700 Lbs. sq. in.
 Is a Report on Main Boilers now forwarded? Yes

Is { a Donkey } Boiler fitted? NO If so, is a report now forwarded?
an Auxiliary
Is the donkey boiler intended to be used for domestic purposes only?
Plans. Are approved plans forwarded herewith for Shafting 19.3.58 Main Boilers 12.2.57 Auxiliary Boilers Donkey Boilers
(If not, state date of approval) 2/12/58, 17/12/58 7.5.58
Superheaters 15.8.58 General Pumping Arrangements 22/12/58 Oil Fuel Burning Arrangements 2.6.58
Geared turbines } Steam piping 9.1.58 Boiler feed 15.1.58, 22/5/59
situated aft. } Have torsional vibration characteristics of system been approved YES Date of approval 19th March, 1958.

SPARE GEAR.

Has the spare gear required by the Rules been supplied. YES
State the principal additional spare gear supplied. Screw shaft, impeller & shafts for main circulating,
extraction & condensate pumps.

The foregoing is a correct description.

Dates of Survey while building During progress of work in shops - - 1959. 5/3, 28/5, 3/7, 25/8, 3/9, 17/9, 24/9, 23/10, 10/11, 18/11, 24/11, 9/12, 17/12.
During erection on board vessel - - 1960. 18/1, 3/2, 4/2, 10/2, 12/2, 25/2, 28/2, 26/2, 8/3, 25/3, 1/4, 4/4, 15/4, 22/4, 5/5, 9/5, 13/5, 17/5, 1/6, 23/4, 13/5, 30/8, 16/9, 26/9, 27/9, 24/8, 16/9, 26/10, 3/11, 4/11, 5/11, 6/11.
Total No. of visits. 58.

Dates of Examination of principal parts - Casings Nts Rpt 781 Rotors Nts Rpt 781 Blading Nts Rpt 781 Gearing Nts Rpt 781
Wheel shaft Nts Rpt 781 Thrust shaft Intermediate shafts 24.9.59 Tube shaft Screw shaft 15.4.60
Propeller 15.4.60 Stern tube 4.3.60 Engine and boiler seatings 15.4.60 Engine holding down bolts 15.4.60
Completion of fitting sea connections 15.4.60 Completion of pumping arrangements 16.9.60 Boilers fixed 15.4.60 Engines tried under steam 22.25/10
Main boiler safety valves adjusted 24.9.60 Thickness of adjusting washers
Rotor shaft, Material and tensile strength Nts Rpt 781 Identification Mark
Flexible Pinion Shaft, Material and tensile strength Nts Rpt 781 Identification Mark
Pinion shaft, Material and tensile strength Nts Rpt 781 Identification Mark
; Chemical analysis

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 Nts Rpt 781 Identification Mark Thrust shaft, Material Identification Mark
Intermediate shafts, Material 44/50kg/mm Identification Marks 234 & 238 Tube shaft, Material Identification Marks
Screw shaft, Material 44/50kg/mm Identification Marks 230 Steam Pipes, Material Alloy steel Test pressure 86.4kg/cm
Date of test 1/10/59, 14/10/59, 2/11/59, 5/10/60, 5/11/59 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 machy. space, steam smothering app. for pump rooms, cargo tanks, oil fuel, bunker tanks, cofferdams.
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 No
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 has been securely fitted on board
and examined under working conditions during sea trials in accordance with the Rules and approved

No evidence of torque reversal in the form of gear hammer was noted in the main gearing and in acco
with the terms of the Secretary's letter dated 27th August 1957, the tooth contact distribution of t
pinions and wheels were coated with an approved spirit lacquer and on examination after sea trials
marking indicated freedom from hard bearing of more than 70% contact across the faces over the
involute profile.
The materials and workmanship are good. The two main boilers have been securely fitted on board
(fitted to burn oil fuel F.P. above 150°F) in accordance with Rule Requirements and safety valves
adjusted under steam to approved working pressure.
The Machinery is eligible in our opinion to have notation L.M.C. II.60, T.S. (C.L.)
2 W.T.B. 700 lbs. sq. ins (SPT)

The amount of Entry Fee ... £ : : When applied for.
Special ... N.F. 6.397.50: 3.2.19.61
Mr. Bolender N.F. 162.50
Donkey Boiler Fee ... £ : : When received.
Travelling Expenses (if any) N.F. 2.706 6.90 19.
Committee's Minute FRIDAY - 3 MAR 1961
Assigned See Rpt. 1
J. Martin and self.
Engine Surveyor to Lloyd's Register of Shipping.

