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4 OCT 1950

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# Report on Steam Turbine Machinery.

No. 120864

18 JAN 1951

Date of writing Report 20 SEP 1950 When handed in at Local Office 25 SEP 1950 Port of London  
No. in Survey held at Grith Kent. Date, First Survey 2.5.50 Last Survey 17.8.1950  
(Number of Visits 7)  
Reg. Book on the T.E.S. SAN SALVADORE. Tons (Gross)      (Net)       
Built at Haverton Hill on Tees By whom built Furness S.B.Co. Yard No. 445 When built       
Engines made at Grith By whom made G.E.C. (Foster & Chalmer) Engine No. 5405/6 When made 1950  
Boilers made at      By whom made      Boiler No.      When made       
Shaft Horse Power at Full Power      Owners      Port belonging to       
Nom. Horse Power as per Rule      Is Refrigerating Machinery fitted for cargo purposes      Is Electric Light fitted       
Trade for which Vessel is intended     

TEAM TURBINE ENGINES, &c.—Description of Engines Auxiliary Turbo Generators  
No. of Turbines Two Direct coupled, single reduction geared } D.C. Generators to propelling shafts. No. of primary pinions to each set of reduction gearing one.  
Direct coupled to { Alternating Current Generator      phase      periods per second      }  
Direct Current Generator      rated 400 Kilowatts 220 Volts at 1000 revolutions per minute;  
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	H. P.			H. 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.
1st Expansion	<u>.66</u>	<u>18.82</u>	<u>1</u>	<u>1.04</u>	<u>20.70</u>	<u>1</u>						
2nd	<u>1.02</u>	<u>19.18</u>	<u>1</u>	<u>1.30</u>	<u>20.96</u>	<u>1</u>						
3rd	<u>Velocity wheels</u>			<u>1.22</u>	<u>22.38</u>	<u>1</u>						
4th				<u>1.60</u>	<u>22.76</u>	<u>1</u>						
5th				<u>2.26</u>	<u>23.42</u>	<u>1</u>						
6th				<u>2.88</u>	<u>24.04</u>	<u>1</u>						
7th				<u>Pateau's Drills</u>								
8th												
9th												
10th												
11th												
12th												

Shaft Horse Power at each turbine { H.P.      I.P.      L.P.      }  
Revolutions per minute, at full power, of each Turbine Shaft { H.P.      I.P.      L.P.      }  
Rotor Shaft diameter at journals { H.P. 3 1/2" I.P.      L.P.      }  
Pitch Circle Diameter { 1st pinion 4.275" 1st reduction wheel 27.725" 2nd pinion      main wheel      }  
Width of Face { 1st reduction wheel 8 3/4" main wheel 8 3/4" }  
Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 7 1/2" 1st reduction wheel 7 3/4" 2nd pinion      main wheel      }  
Flexible Pinion { 1st      2nd      }  
Pinion Shafts, diameter at bearings { External 3 1/2" Internal      }  
1st 4 1/2 / 5 1/2 driving side diameter at wheel shroud, { 1st      2nd      }  
Generator Shaft, diameter at bearings       
Wheel Shafts, diameter at bearings { main      }  
Propelling Motor Shaft, diameter at bearings       
Intermediate Shafts, diameter { as per rule      as fitted      }  
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      }  
Is the { tube } shaft fitted with a continuous liner { screw }  
Bronze 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 propeller 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 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       
Length of Bearing in Stern Bush next to and supporting propeller       
Propeller, diameter      Pitch      No. of Bades      State whether Moveable      Total Developed Surface      square feet.  
If Single Screw, 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     

Condenser      No. of Turbines fitted with astern wheels      Feed Pumps { No. and size      How driven      }  
Pumps connected to the Main Bilge Line { No. and size      How driven      }  
Ballast Pumps, No. and size      Lubricating Oil Pumps, including Spare Pump, No. and size       
Are two independent means arranged for circulating water through the Oil Cooler      Suctions, connected both to Main Bilge Pumps and Auxiliary       
Bilge Pumps, No. and size:—In Engine and Boiler Room      In Pump Room       
In Holds, &c.       
Main Water Circulating Pump Direct Bilge Suctions, No. and size      Independent Power Pump Direct Suctions to the Engine Room       
Bilges, No. and size      Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes       
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       
Are all 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 line       
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 covering plate       
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       
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      Is the Shaft Tunnel watertight      Is it fitted with a watertight door      worked from



