

EXHAUST REPORT ON STEAM TURBINE MACHINERY. No. 1689.

4a.

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of writing Report 15th March 1935 When handed in at Local Office 10 Port of BREMEN
in Survey held at BREMEN Date, First Survey 12. 11. 34 Last Survey 8. 3. 1935
Book. (Number of Visits 16)
on the STEEL S.S. THODE FAGELUND Tons Gross 4332 Net 2623
built at SUNDERLAND By whom built SIR J. LAING & SONS, L.D. Yard No. When built 1920
made at BREMEN By whom made DESCHIMAG, WERK A. G. WESER Engine No. 573 When made 1935
made at EXHAUST TURBINE By whom made Owners WILH. WILHELMSEN Boiler No. When made
Horse Power at Full Power 1040 TOTAL I.H.P. 3100 Port belonging to TÖNSBERG
Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
made for which Vessel is intended

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

TURBINE LOADING.	H.P.			I.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.
EXPANSION							94 1/2	744 1/2	1			
"							105	755	1			
"							116	766	1			
"							127	777	1			
"							141	791	1			
"							155	805	1			
"							170	820	1			
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Shaft Horse Power at each turbine H.P. 1040
Revolutions per minute, at full power, of each Turbine Shaft I.P. 4120
Pitch Circle Diameter 1st pinion 170.3 2nd pinion 338.3 1st reduction wheel 1509.7 2nd reduction wheel 1995.3
Width of Face 1st reduction wheel 465 2nd reduction wheel 76
main wheel 600

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 265 2nd pinion 422.5 1st reduction wheel 585
Flexible Pinion Shafts, diameter at bearings External 1st 145 2nd 320 Internal 1st 1445 2nd 245
Generator Shaft, diameter at bearings 1st 159.3 2nd 321.8
Propelling Motor Shaft, diameter at bearings main 1901

Wheel Shafts, diameter at bearings 1st 250/230 2nd 480
Intermediate Shafts, diameter as per rule 13.5
Thrust Shaft, diameter at collars as per rule 356

Tube Shaft, diameter as fitted
Screw Shaft, diameter as fitted
Bronze Liners, thickness in way of bushes as fitted
Thrust Shaft, diameter at collars as fitted

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
Length of Bearing in Stern Bush next to and supporting propeller

Propeller, diameter 18.0 Pitch No. of Blades State whether Moveable Total Developed Surface square feet.
Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or L.P. Turbine 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 to both 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
How are they protected

What pipes pass through the bunkers Have they been tested as per rule
What pipes pass through the deep tanks
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

