

REDUCTION GEAR REPORT ON ~~STEAM~~ TURBINE MACHINERY.

No. 1645.

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Date of writing Report 28th Aug 1934 When handed in at Local Office 10 Port of BREMEN
No. in Survey held at BREMEN Date, First Survey 10th FEBR. 34 Last Survey 21st AUGUST 1934
Reg. Book. on the MOTOR VESSEL BOSCHFONTEIN (ex Vieuwerk) (Number of Visits 14)
Built at ROTTERDAM By whom built N.V. MCH. & SCHEEPWERF K. SMIT JR. Yard No. When built 1928
Engines made at BREMEN By whom made DESHIMAB. P. G. WESER Engine No. 41 When made 1934
Boilers made at By whom made Boiler No. When made
Shaft Horse Power at Full Power 8000 Owners VEREENIGDE NEDERLANDSCHE SCHEERMAATS. Port belonging to THE HAGUE
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 S.R. GEAR & VULCAN OIL COUPLING TYPE K 280 MAIN ENG. CO 1 PROP. SHAFT
OIL ENGINES Ahead 2 Direct coupled, single reduction geared } to 1 propelling shafts. No. of primary pinions to each set of reduction gearing 2
No. of Turbines Astern double reduction geared }
direct coupled to { Alternating Current Generator phase periods per second { rated Kilowatts Volts at 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 LADING.	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.
1ST EXPANSION												
2ND												
3RD												
4TH												
5TH												
6TH												
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine 4200 H.P. 215 L.P. 105 Revolutions per minute, at full power, of each turbine 1st reduction wheel main shaft

Rotor Shaft diameter at journals { H.P. I.P. L.P. Pitch Circle Diameter { 1st pinion 1367.03 2nd pinion main wheel 2706.45 Width of Face { 1st reduction wheel main wheel 900

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 725 2nd pinion 1st reduction wheel main wheel 735 945

Flexible Pinion Shafts, diameter { 1st 2nd Pinion Shafts, diameter at bearings { External 1st 560 2nd 380/300 Internal 1st 2nd diameter at bottom of pinion teeth { 1st 1342.5 2nd

Wheel Shafts, diameter at bearings { 1st 560 main 560 diameter at wheel shroud, { 1st 25907 main 25907 PRIMARY WHEEL Generator Shaft, diameter at bearings 450 Propelling Motor Shaft, diameter at bearings

Intermediate Shafts, diameter { as per rule as fitted Thrust Shaft, diameter at collars { as per rule 560 as fitted 560

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 {

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 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
If so, state type 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.
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. 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

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

BOILERS, &c.—(Letter for record

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Is a Report on Main Boilers now forwarded?

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 Shafting 3/11/33 Main Boilers

Auxiliary Boilers

Donkey Boilers

Superheaters

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal ~~additional~~ spare gear supplied

12 coupling bolts, a number of assorted bolts & nuts
2 wheel shaft bearing halves, 2 primary shaft bearing halves.
4 thrust shaft bearing halves
2 pinion shaft bearing halves
12 pads & bolts for main thrust bearing
14 " " " for primary shaft thrust
16 " " " for pinion thrust.

Deutsche Schiff- und Maschinenbau Aktiengesellschaft

[Signature]

Manufacturer.

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops -- Feb. 10, April 4, 23, May 2, 11, June 13, 15, 22, 27, July 7, 18, 28, Aug. 11, 21.
During erection on board vessel ---
Total No. of visits 14

Dates of Examination of principal parts—Casings 11.5.34 OIL COUPLINGS 22.27.6.34 PINIONS 7.7.34 Gearing 11.8.34
Wheel shaft 7.7.34 Thrust shaft 7.7.34 PRIMARY WHEEL 15.6.34 Tube shaft Screw shaft
Propeller Stern tube Engine and boiler seatings Engine holding down bolts
Completion of fitting sea connections Completion of pumping arrangements Boilers fixed Engines tried under steam
Main boiler safety valves adjusted Thickness of adjusting washers

Rotor shaft, Material and tensile strength

PRIMARY WHEEL

Pinion shaft, Material and tensile strength Prim. Man. Steel 50 kg/mm²

Pinion shaft, Material and tensile strength Prim. Man. Nickel Steel 65 kg/mm²

1st Reduction Wheel Shaft, Material and tensile strength LLOYD'S M.B. 10226. 26.134

Wheel shaft, Material P. M. Steel

Identification Mark AC. 7.7.34

Thrust shaft, Material

Identification Mark

MAIN WHEEL RIM

Intermediate shafts, Material P. M. Steel Identification Marks AC. 7.7.34

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 Gear with Vulcan Coupling and Main Thrust has been built under Special Survey in accordance with the approved plan and the Secretary's letters. The materials used in the construction are made at works recognized by the Committee and tested as required by the Rules. Materials & workmanship are of good quality.

This machinery has been shipped to: Flushing to N.V. Koninklijke Maatsk.
"DE SCHELDE".

The amount of Entry Fee ... £

Special survey ... RM 800,--

Donkey Boiler Fee ...

Travelling Expenses (if any) ...

When applied for,

28.8.1934

When received,

8/10/34

Sh. 26/11/34
when returned from
Rel.

Committee's Minute

Assigned

A. Carstensen
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation