

No. 322

TURBO GENERATOR

Received at London Office. 11 JUN 1951

ing Report.	11/1/	1950	When handed in at Local Office.	11/1/	1950	Port of	Yokohama	Kobe
Survey held at	Tokyo	Aioi, Japan	Date, First Survey.	22-5-50	Last Survey.	23-12-1950	19-10-1950	(Kobe)
ook						(Number of Visits	10	17)
on the	S/v "Nichiei Maru"					Tons	Gross 11806.07	Net 8550.57
	Aioi, Japan	By whom built	Harima Shipbuilding Wks	Yard No.	453	When built	Dec. '50.	
made at	Tokyo, Japan	By whom made	Ishikawajima H. Industries	Engine No.	1A1088	When made	19-10-50	
made at	Aioi Japan	By whom made	Harima Shipbuilding	Boiler No.	8722 8724	When made	Dec. '50.	
orse Power at Full Power	270 x 2	Owners.	Nitto Shosen Co., Ltd.	Port belonging to		Tokyo		
orse Power as per Rule	45 x 2 = 90	Is Refrigerating Machinery fitted for cargo purposes	-----	Is Electric Light fitted		Yes		
or which Vessel is intended		Ocean going						

IM TURBINE/ENGINES, &c.—Description of Engines. Impulse type 5 stages

Turbines Ahead Direct coupled,
 Astern single reduction geared } to propelling shafts. No. of primary pinions to each set of reduction gearing
 double reduction geared }
 coupled to { Alternating Current Generator phase periods per second } rated Kilowatts Volts at revolutions per minute;
 Direct Current Generator }
 supplying power for driving Propelling Motors, Type
 Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

[illegible]

orse Power at each turbine	H.P. 268	Revolutions per minute, at full power, of each Turbine Shaft	H.P. 10038	1st reduction wheel		
	I.P.		I.P.	main shaft 1800		
	L.P.		L.P.			
shaft diameter at journals	H.P. 70	Pitch Circle Diameter	1st pinion 115.56	reduction wheel 644.44	Width of Face	1st reduction wheel 100
	I.P.		2nd pinion	main wheel		main wheel
	L.P.					

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { ~~1st~~ pinion 780, 210 ~~reduction wheel~~ 240
2nd pinion main wheel

Pinion { 1st..... **Pinion Shafts, diameter at bearings** *External* 1st { 60..... 2nd { diameter at bottom of pinion teeth { 1st..... 107.59
 diameter { 2nd..... *Internal* 1st { 2nd { diameter at bottom of pinion teeth { 2nd.....

Shafts, diameter at bearings { 1st diameter at wheel shroud, { 1st Generator Shaft, diameter at bearings. 80 in. 90 in. (ENGINE SIDE)
main 100 main Propelling Motor Shaft, diameter at bearings.

dinate Shafts, diameter as per rule _____ Thrust Shaft, diameter at collars as per rule _____ Tube Shaft, diameter as per rule _____
 as fitted _____ as fitted _____ as fitted _____

Haft, diameter as per rule..... Is the { tube } shaft fitted with a continuous liner {
 as fitted..... screw }
Bronze Liners, thickness in way of bushes as per rule.....
 as fitted.....
 between bushes as per rule..... Is the after end of the liner made airtight in the propeller base..... If the liner is.....

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 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

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
appliance fitted at the after end of the tube shaft..... Length of Bearing in Stern Bush next to and supporting propeller.....
Diameter Pitch No. of Blades State whether Movable Total Diameter of Shaft

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
(No. and size

No. of Turbines fitted with astern wheels.....

Feed Pumps { How driven

(No. and size

connected to the Main Bilge Line } (How driven.....)

Pumps, No. and size..... Lubricating Oil Pumps, including Spare Pump, No. and size.....

Dependent means arranged for circulating water through the Oil Cooler..... Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
No. and size:—In Engine and Boiler Room.....

<p>ater Circulating Pump Direct Bilge Suctions, No. and size.....</p>		<p>Independent Power Pump Direct Suctions to the Engine Room</p>	
<p>and size.....</p>		<p>Are all the Bilge Suction pipes in Hold and Tunnel Well fitted with strainers.....</p>	

Bilge Connections fitted direct on the skin of the ship. Are they fitted with Valves or Cocks.

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.....
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.....

pass through the bunkers.....How are they protected.....

pass through the deep tanks.....Have they been tested as per rule.....

ngement 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 ent to another..... Is the Shaft Tunnel watertight..... Is it fitted with a watertight door..... worked from.....

010229-010235-0049

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 } Boiler fitted?..... If so, is a report now forwarded?.....
{ an Auxiliary }

Plans. Are approved plans forwarded herewith for Shafting..... Main Boilers..... Auxiliary Boilers..... Donkey Boilers.....
(If not state date of approval)

Superheaters..... General Pumping Arrangements..... Oil Fuel Burning Arrangements.....

Spare Gear. State the articles supplied:—

Bearing bushes for each reduction gear and each rotor.

Bolts, reamer bolts, studs and nuts for joint of turbine casings.

The foregoing is a correct description,

H. Sasaki *T. Shigetomi*

Dates of Survey while building { During progress of work in shops - - } 12 VISITS (Tokyo)
{ During erection on board vessel - - } 1950-Nov. 10, Dec. 6, 12, 14, 23 (HARIMA)
Total No. of visits 17

Dates of Examination of principal parts—Casings 15 & 19-9-50 Rotors 22-9-50 02 pcs Blading 3-10-50 Gearing 7-10-50

Wheel shaft 22-9-50 Thrust shaft - Intermediate shafts - Tube shaft - Screw shaft -

Propeller - Stern tube - Engine and boiler seatings 10-11-50 Engine holding down bolts 10-11-50

Completion of pumping arrangements - Boilers fixed - Engines tried under steam { 19-10-50
6-12-50
23-12-50 }

Main boiler safety valves adjusted - Thickness of adjusting washers -

Rotor shaft, Material and tensile strength 44.6 43.5 44.1 ton/ " Ni Cr Steel Identification Mark Y 935
43.2 44.1 44.1

Flexible Pinion Shaft, Material and tensile strength - Identification Mark Y 953

Pinion shaft, Material and tensile strength 5312-1 (41.7) Ni Steel Identification Mark Y 954
5312-2 41.7

Reduction Wheel Shaft, Material and tensile strength 33.4 Forging steel Identification Mark

Wheel shaft, Material - Identification Mark - Thrust shaft, Material - Identification Mark

Intermediate shafts, Material - Identification Marks - 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 -

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 Turbine has been constructed under the

supervision of the Society's Surveyors in accordance with approved plans and the Rules, the

workmanship and materials have been found satisfactory. The turbine was examined during

after shon trials, and found in good order. The turbine is intended for installation in Ship

being constructed at the Harima Shipbuilding Works Ltd., Japan.

It is submitted that this engine is eligible for classification with this Society with the

notation of LMC when satisfactorily installed in the vessel. The turbo generators have now

satisfactorily installed on board and tested under full load and overload conditions as required

by the Rules.

The amount of Entry Fee £ : : When applied for,
Special £ : : 19
Donkey Boiler Fee £ : : When received,
Travelling Expenses (if any) £ : : 19

Shigetomi
Engine Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 24 AUG 1951

Assigned *See F.E. moly. rpt.*



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