

REPORT ON MACHINERY.

CHICAGO.

No. 168

Date of writing Report 1910 When handed in at Local Office 1910 Port of Chicago, Illinois
No. in Survey held at Indianapolis Reg. Book. Midwest Engine Co. Date, First Survey 27/2/20 Last Survey 7/3/20
on the Twin Screw Steamer Gypsy Maru (Number of Visits)
Master Gichi Yamamoto Built at Yorumu By whom built Asano S.B.C. When built 1921
Engines made at Indianapolis Ind. By whom made Midwest Engine Co. when made 1920
Boilers made at Yorumu By whom made Asano S.B.C. when made 1921
Registered Horse Power Owners Goro Kisen Kaisha Port belonging to Yokohama
Shaft Horse Power at Full Power 5600 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

TURBINE ENGINES, &c.—Description of Engines Parsons Cross Compound No. of Turbines 2.
Diameter of Rotor Shaft Journals, H.P. 4" L.P. 4" Diameter of Pinion Shaft 8.050" Outside teeth
Diameter of Journals 5" Distance between Centres of Bearings 28x28x6 1/2" Diameter of Pitch Circle 7.75" H.S. 16.5" Int.
Diameter of Wheel Shaft 12" Int. 14 1/2" S. Distance between Centres of Bearings 58.75" Int. 43" S. Diameter of Pitch Circle of Wheel 51.25" Int. 93.25" S.
Width of Face 14" Int. 26" S. Diameter of Thrust Shaft under Collars 9.075" Diameter of Tunnel Shaft as per rule as fitted.

No. of Screw Shafts Diameter of same as per rule as fitted Diameter of Propeller Pitch of Propeller " " L.P. H.P.
No. of Blades State whether Moveable Total Surface Diameter of Rotor Drum, H.P. 13.16" L.P. 22" astern 21.125" 23.3125"
Thickness at Bottom of Groove, H.P. 12.2" L.P. 21.2" Astern 20.125" Revs. per Minute at Full Power, Turbine 3600 Propeller 90 (19.50 22.5625)

ARTICULARS OF BLADING. H.P. ASTERN 23.0625 22.3125 21.5625

	H.P.			L.P.			H.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.
1ST EXPANSION	.605	14.19	5	2.23	26.44	2	1.562	27.187	1
2ND	.7925	14.565	6	2.79	27.565	2	2.312	27.937	1
3RD	1.0425	15.065	5	3.475	28.93	2	3.062	28.687	1
4TH	1.3550	15.69	5	4.345	30.67	2	L.P. ASTERN.		
5TH	1.105	18.19	3	4.965	31.91	1	2.656	28.662	1 1st EXPANSION
6TH	1.475	18.815	3	"	"	1	4.281	29.687	1 2nd
7TH	1.8500	19.68	3	"	"	1	5.906	31.312	1 3rd
8TH	2.3500	20.68	3	"	"	1			"

No. and size of Feed pumps

No. and size of Bilge pumps

No. and size of Bilge suction in Engine Room

In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes 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 are carried through the bunks

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

Each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunks or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Percentages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each Boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Length of plain part

bottom

bottom

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

Thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diameter of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates: Thickness

How stayed

SUPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____
Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____
Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Raising Gear fitted _____

IS A DONKEY BOILER FITTED? _____ If so, is a report now forwarded? _____

SPARE GEAR. State the articles supplied:— _____

The foregoing is a correct description,

Midwest Engine Company. Manufacturer.

J.C. Bopp Asst. Engr. Manager.

Dates of Survey while building { During progress of work in shops - - 27/2/20, 12/3/20, 13/4/20, 7/5/20
During erection on board vessel - - -
Total No. of visits _____

Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Casings 27/2/20, 7/5/20 Rotors 27/2/20, 7/5/20 Blading 12/3/20, 13/4/20, 7/5/20 Gearing 13-7-20

Rotor shaft 27/2/20, 7/5/20 Thrust shaft _____ Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam pipes tested 7/5/20 Engine and boiler seatings _____ Engines holding down bolts _____

Completion of pumping arrangements _____ Boilers fired _____ Engines tried under steam _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material and tensile strength of Rotor shaft *ON Steel H.P. 62800, L.P. 72050 lb. per sq. in.* Identification Mark on Do. *H.P. 14800-22, L.P. 14800*

Material and tensile strength of Pinion shaft *Chrome Vanadium Steel 111,240 lb. tensile* Identification Mark on Do. *LLOYD'S 1570, 1574, 4-5-20 J.R.*

Material of Wheel shafts *S* Identification Mark on Do. *1868 23-4-20 J.P.* Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes _____ Test pressure _____

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 Section 49 of the Rules been complied with _____

Is this machinery a duplicate of a previous case _____ If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c. *The above turbines have been constructed under special Survey.*

The material and workmanship employed in their manufacture are, so far as can be seen, sound and good.

The casings pipes and connections have been submitted to the required hydraulic tests with satisfactory results.

The amount of Entry Fee ... £ : : When applied for, *Chicago Aug 10 1920*
Special ... *3 Chicago charged 54 00* 19 20
Donkey Boiler Fee ... £ : : When received, *19*
Travelling Expenses (if any) £ *\$ 68 96* 19
Charged.

H. Magoris, J. Hockhart.
Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 22 NOV. 1921

Committee's Minute TUE. NOV. 11 1921

Assigned

See Zka Rpt No. 2881



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