

Rpt. 4b/4f REPORT ON INSTALLATION OF INTERNAL COMBUSTION MACHINERY
(Inst) (Sheet 1)

Received London

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

NOTE.—The particulars in this report are to be given as fully and as clearly as possible. Where the answer is "NO" or "NONE", say so. Ticks and other signs of doubtful meaning are not to be used. Wording not applicable to be cancelled. Where items are marked with an asterisk the particulars need not be repeated here if they have already been given on the relevant Rpt. 4b (Cons) or 4f (Cons).

Ship's Name	"AMUR"	Port	Yokohama
Processing Number: LR		Date of completing rpt.	15-6-65
		Rpt. No.	6004
Gross tons	-	Place of survey, if different from above	Hakodate
No. of visits:			
In shops	-	First date	21-9-64
		Last date	13-4-65
On ship	-	First date	5-4-65
		Last date	17-5-65
Owners	USSR	Port of registry	Leningrad
Ship built by	Hakodate Dock Co., Ltd., Hakodate	Ship- Yard No.	356
Main engines made by	-	Yard	-
		When	1965 5
		Engine No.	-
		When	-
Gearing made by	-	Gear No.	-
		When	-
Aux./donkey boilers made by	-	Boiler No.	-
		When	-
Machinery installed by	Hakodate Dock Co., Ltd., Hakodate Shipyard	When	1965 5
Particulars of service of ship if limited for classification	"Dredger", "River & Inland Water Service"		
Particulars of vegetable oil or other special cargo notation, if required	-		
If ship is to be classed for navigation in ice, state whether class 1, 2 or 3	-		
Is ship an oil tanker?	-	Is refrigerating machinery fitted?	Yes (Domestic use)
If so, is it for cargo purposes?	No	Type of refrigerant	-
Is the refrigerating machinery space isolated from the propelling machinery space?	-		
	Is the refrigerated cargo installation to be classed?	-	
No. of main engines	-	Brief description of propulsion system	-
No. of propellers	-		
Fee	¥ 100,000.-	Expenses	¥ 15,000.-

<u>MAIN INTERNAL COMBUSTION RECIPROCATING ENGINE</u>			
To be reported on Rpt. 4b (Cons)	-	Port	-
Rpt. No.	-		
<u>MAIN GAS TURBINES</u>			
To be reported on Rpt. 4f (Cons)	-	Port	-
Rpt. No.	-		
<u>ELECTRIC PROPULSION.</u> (Internal combustion reciprocating engines or gas turbines)			
Electrical particulars to be reported on Rpt. 4d	-	Port	-
Rpt. No.	-		
<u>REDUCTION GEARING.</u> (Internal combustion reciprocating engines or gas turbines)			
To be reported on Rpt. 4e	-	Port	-
Rpt. No.	-		

*Are flame guards or traps fitted to crankcase relief devices?		No. of lub. oil coolers	MAIN -	AUX. 3
*Is a torsional vibration damper or detuner fitted to the shafting?		Is engine fitted directly on tank top, or on a built-up seating?	Built-up seating	
*Where positioned?		*Can engine/turbine be reversed?	-	
*Type		*If not, how is reversing effected?	-	
Is the engine equipped to operate on heavy fuel?	Yes	Cooling medium for	CYLINDERS Fresh water	
No. of fresh water coolers	MAIN -	PISTONS	FUEL VALVES Fresh water	
	AUX. 2			

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Surveyor to Lloyd's Register of Shipping
H. Terashima & K. Ikehata

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CLUTCHES, FLEXIBLE COUPLINGS, &c. If a clutch or other flexible connection is fitted between engine/turbine and gearing, or between engine and line shafting, give Makers' name, brief description and, for clutches, state how operated.

If main engine can be used for purposes other than propulsion when declutched, state what purpose also at what maximum B.H.P. & R.P.M.

AIR COMPRESSORS AND RECEIVERS

State No. of independently driven air compressors, also capacity of each and whether a separator or filter is provided between each compressor and the air receivers, type of prime mover, position in ship, Port and No. of cert.

1-Elect motor driven, 20m³/h (FA) x 25 kg/cm², No separator or filter
 S.S in eng. room Cert. No.M-11642 Kobe

1-Hand starting diesel eng. driven, 4,5 m³/h (FA) x 25 kg/cm², No separator or filter
 S.S in eng. room No Certificate issued

State No. of starting air receivers, both main and auxiliary, capacity of each, position in ship, Port and No. of cert.

2-200 and 1-85L air receivers ; fwd, centre & after (SS)
 Cert. No.HAR 16 & 17 (Hakodate)
 Cert. No.AR 106003 (Kobe)

How are air receivers first charged?

by hand starting oil engine driven aux
 air compressor

Maximum working pressure of starting air system 25 kg/cm²

Are the safety devices in accordance with the Rules?

Yes

Are bursting discs or flame arresters fitted at the starting air valves on each cylinder?

No

Has the starting of the main engines been tested and found satisfactory?

Yes

STEAM INSTALLATION

No. of aux./donkey boilers (see Key to R.B.) burning oil fuel

Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil-fired boilers?

Working pressure

Port and rpt. or cert. Nos. for aux./donkey boilers

Type

Position

Is a superheater fitted?

Is steam essential for the operation of the ship at sea?

Are these boilers also heated by exhaust gas?

If so, are any steam pipes over 3 ins. bore?

No. of aux./donkey boilers (see Key to R.B.) heated by exhaust gas only

What is their material?

Working pressure

For oil-fired boilers, is the arrangement of pipes, valves, controls, &c., in accordance with Rules?

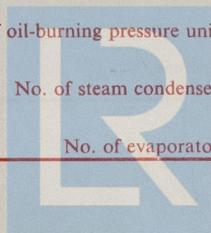
Type

No. of oil-burning pressure units

Position

No. of steam condensers

No. of evaporators



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Date of approval of torsional vibration characteristics of the propelling machinery system with:—

Particulars of barred speed range(s) if imposed, with:—

(a) Working propeller

(a) Working propeller

(b) Spare propeller

(b) Spare propeller

STRAIGHT SHAFTING

Max. BHP/SHP approved for each line of shafting
THRUST SHAFT. Separate or integral with crank, wheel or electric motor shaft?

Corresponding RPM of propeller

MN

Diameter adjacent to collar

Material of screw/tube shaft

Material

Minimum approved tensile strength

Minimum approved tensile strength

Is an oil gland fitted?

INTERMEDIATE SHAFT
Diameter

What type?

Material

If an approved type, state name

Minimum approved tensile strength

Length of bearing next to and supporting propeller

SCREWSHAFT. Dia. of cone at large end

Material of bearing

Is screwshaft fitted with a continuous liner?

Material of sterntube

TUBE SHAFT (if separate)
Diameter

Is tube shaft fitted with a continuous liner in way of stern tube?

Is sterntube fabricated? In multiple screw ships, is the liner between sterntube & "A" bracket continuous? If not, is the exposed length of shafting between liners readily visible in drydock?

Thickness of screw/tube shaft liner at bearings

PROPELLER

If of special design, state type

State method of control

Is it of reversible pitch type?

If so, is it of approved design?

PROPELLER	BLADE MATERIAL	TENSILE STRENGTH	BUILT OR SOLID	LEFT HAND (LH) OF RIGHT HAND (RH)	NO. OF BLADES	DIAMETER	PITCH	TOTAL DEVELOPED SURFACE
Working								
Spare								

PROPELLER	DESIGN MOMENT OF INERTIA OF PROPELLER (DRY)	CLASS 1, 2 OR 3	THICKNESS OF BLADES			LENGTH OF BLADE SECTION AT 25% RADIUS	RAKE OF BLADES
			AT TOP OF ROOT FILLET	AT 25% RADIUS	AT TIP		
Working							
Spare							

OIL FUEL TANKS

No. and position of oil fuel settling or service tanks not forming part of ship structure

1-O.F. Service tank, 1-O.F. Settling tank - located Machinery space upper

LUBRICATION

No. of lub. oil pumps and how driven

One generator engines driven each

No. of oil coolers

3

Can normal supply be maintained with any one pump out of action?

No

No. of duplex oil strainers

SUCTION	PRESSURE
-	3

Is an emergency supply automatically available as per Rule? (turbines only)

-

Are the strainers of magnetic type?

No

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Ship's Name "AMUR"

Port Yokohama

Rpt. No. 6004

STEAM AND OIL ENGINE AUXILIARIES

REF	POSITION OF EACH	TYPE	MADE BY
a	Eng. flat PS	4 SCSA MAN G5V 24/30AL	Mitsubishi Heavy Industries Ltd. Yokohama Shipyard & Eng. Works
b	Eng. flat SS	"	"
c	Eng. flat SS	4 SCSA Kubota KC-2A	Kubota Iron & Machinery Works Ltd.
d	Eng. flat SS	4 SCSA Yammer 5MAL	Yammer Diesel Eng. Co., Ltd.
e			
f			
g			
h			

REF	PORT & No. OF REPORT OR CERTIFICATE	DRIVEN MACHINERY (for electric generators state kw, volts & amps)
a	Yokohama No.M-11671 ✓	(240 KVA 400V, 346A A.C. Generator & 195KW max 550V max 2000A D.C. Generator
b	Eng. No. D-13019, D-13021 ✓	(240 KVA 400V, 346A A.C. Generator & 195KW max 550V max 2000A D.C. Gen. & Air compressor for Rock Breaker
c	Kobe No.M-106287 (Eng.No.2001)	Emergency air compressor
d	Kobe No.-0-111730 (Eng.No.4F- 5122 BM)	400V 150KVA 216.5A Aux A.C. Generator
e		
f		
g		
h		

If electric current is used for essential services at sea, state the minimum No. and capacity of generators required

- (1) So that the ship may operate at sea -
- (2) For refrigerated cargo purposes -

Has the spare gear required by the Rules been supplied? **Yes**
Has all the machinery been tried under full working conditions & found satisfactory? **Yes**

Date & duration of full-power sea trials of main engines
Has the manœuvring of the main engines been tried and found satisfactory? **Yes**

DECLARATION TO BE SIGNED BY INSTALLING ENGINEERS

To the best of our knowledge this machinery has been installed in conformity with the Rules, Regulations and requirements of Lloyd's Register of Shipping, and the foregoing particulars of main and auxiliary machinery and pressure vessels (as shown on sheets 1, 2 & 3) are correct.

The Hakodate Dock Co., Ltd.
Hakodate Shipyard

(date) 15-6-65

Y. Honda
Director

A previous similar case was for (name)

"LADOGA"

Port and Rpt. No. Yokohama No. 5965

IDENTIFICATION MARKS (copies of certificates to be forwarded)

- Thrust shaft -
- Intermediate shafts -
- Screw and tube shafts -
- Propellers -
- Other important items -



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DATES OF APPROVAL OF PLANS			
Straight shafting	-	Oil burning arrangements	-
		Compressed air system	15-10-64
		Main steam pipes	-
Air receivers	6-7-64	Boiler feed system	-
Clutch	-	Main boilers	-
Reversing gear & control	-		
Flexible coupling	-	Superheaters	-
Separate fuel tanks	-		
General pumping arrangements	18-5-64	Aux. boilers	-
Bilge, ballast & oil fuel pumping arrangements in the machinery space	3-2-65	Donkey boilers	-
		Feed water economisers	-
Oil fuel piping & fittings at settling & service tanks	3-2-65	Steam heated steam generators	-
		Propeller (including spare, if supplied)	-
Cargo oil pumping arrangements	-	Stern gear	-
		Oil-retaining gland (if not shown on shafting plan)	-

DATES OF EXAMINATION OF:-			
Fitting of stern tube	-	Alignment* of straight shafting	-
Fitting of propeller	-	Testing of pumping arrangements	10-5-65
Completion of sea connections	10-5-65	Oil fuel lines	7-5-65
Alignment* of crankshaft on board	-	Boiler supports	-
Alignment* of turbines/engines & gearing	-	Steering machinery	-
Holding down bolts & chocks	-	Windlass	17-5-65

*State if aligned when ship in light, ballast or loaded condition light condition

† The machinery reported above has been constructed and installed under Special Survey in accordance with the Rules, approved plans and Secretary's letters. The materials and workmanship are good, the spare gear required by the Rules has been supplied and the machinery is eligible, in my opinion, to be classed. ‡

[Signatures]
 Surveyor to Lloyd's Register of Shipping
 H. Terashima & K. Ikehata

Date of Committee! **FRIDAY - 1 OCT 1965**

Minute *See Rep. 1.*

- † (a) If the installation contains any features of a novel or experimental nature, give particulars.
- (b) If centralised and/or bridge control is fitted for main propelling and/or essential auxiliary machinery, state on a Rpt.-(cont.) where the control room is situated, the machinery controlled from it and give a brief description of the control system, including any automatic system for controlling essential auxiliary machinery.
- ‡ Include any special notation to be assigned.

NOTE.—Where existing machinery is submitted for classification, the circumstances are to be explained as fully as possible, and the recommendation should be suitably amended.