

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. 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:	First date	21-9-64	Last date 13-4-65
In shops -	First date	5-4-65	Last date 17-5-65
On ship			
Owners USSR	Port of registry	Leningrad	
Ship built by	Hakodate Dock Co., Ltd., Hakodate Shipyard	Yard No. 356	When 1965 5
Main engines made by -		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		
*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
No. of fresh water coolers	MAIN -	PISTONS	FRESH WATER
	AUX. 2	FUEL VALVES	FRESH WATER



**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, 20m<sup>3</sup>/h (FA) x 25 kg/cm<sup>2</sup>, No separator or filter  
S.S in eng. room Cert. No.M-11642 Kobe

1-Hand starting diesel eng. driven, 4,5 m<sup>3</sup>/h (FA) x 25 kg/cm<sup>2</sup>, 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/cm<sup>2</sup>

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

Working pressure

Type

Position

Is a superheater fitted?

Are these boilers also heated by exhaust gas?

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

Working pressure

Type

Position

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?

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

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

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

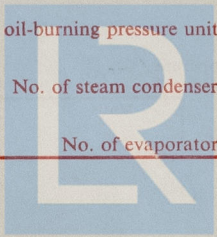
What is their material?

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

No. of oil-burning pressure units

No. of steam condensers

No. of evaporators



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Ship's Name "AMUR"

Port Yokohama

Rpt. No. 6004

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

Minimum approved  
tensile strengthThickness of liner  
between bearings  
How is the after end of  
the liner made watertight  
in the propeller boss?

Material of screw/tube shaft

Minimum approved  
tensile strength

Is an oil gland fitted?

What type?

If an approved type,  
state nameLength of bearing next  
to and supporting propeller

Material of bearing

Material of sterntube

**INTERMEDIATE SHAFT**  
Diameter

Material

Minimum approved  
tensile strength**SCREWSHAFT.** Dia. of  
cone at large endIs screwshaft fitted  
with a continuous liner?**TUBE SHAFT (if separate)**  
DiameterIs tube shaft fitted with a  
continuous liner in  
way of stern tube?Thickness of screw/tube  
shaft liner at bearingsIs 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?**PROPELLER**

If of special design, state type

State method of control

Is it of reversible pitch type?

If so, is it of approved design?

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

PROPEL- LER	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 structure1-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  
3Is an emergency supply automatically  
available as per Rule? (turbines only)

-

Are the strainers of magnetic type?

No

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.







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 Yamner 5MAL	Yamner Diesel Eng. Co., Ltd.
e			
f			
g			
h			

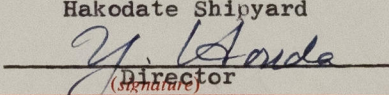
REF	PORT & No. OF REPORT OR CERTIFICATE	DRIVEN MACHINERY (for electric generators state kw, volts & amps)
a	Yokohama No.M-11671 ✓	( 240 KVA 400V, 346A A.C. Generator & 195KW max 550V max 2000A D.C. Generator
b	Eng. No.D-13019, D-13021 ✓	( 240 KVA 400V, 346A A.C. Generator & 195KW max 550V max 2000A D.C. 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 con-  
ditions & found satisfactory? YesDate & 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

  
DirectorA 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	-
Air receivers	6-7-64
Clutch	-
Reversing gear & control	-
Flexible coupling	-
Separate fuel tanks	-
General pumping arrangements	18-5-64
Bilge, ballast & oil fuel pumping arrangements in the machinery space	3-2-65
Oil fuel piping & fittings at settling & service tanks	3-2-65
Cargo oil pumping arrangements	-

Oil burning arrangements	-
Compressed air system	15-10-64
Main steam pipes	-
Boiler feed system	-
Main boilers	-
Superheaters	-
Aux. boilers	-
Donkey boilers	-
Feed water economisers	-
Steam heated steam generators	-
Propeller (including spare, if supplied)	-
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. ‡

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.

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.



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