

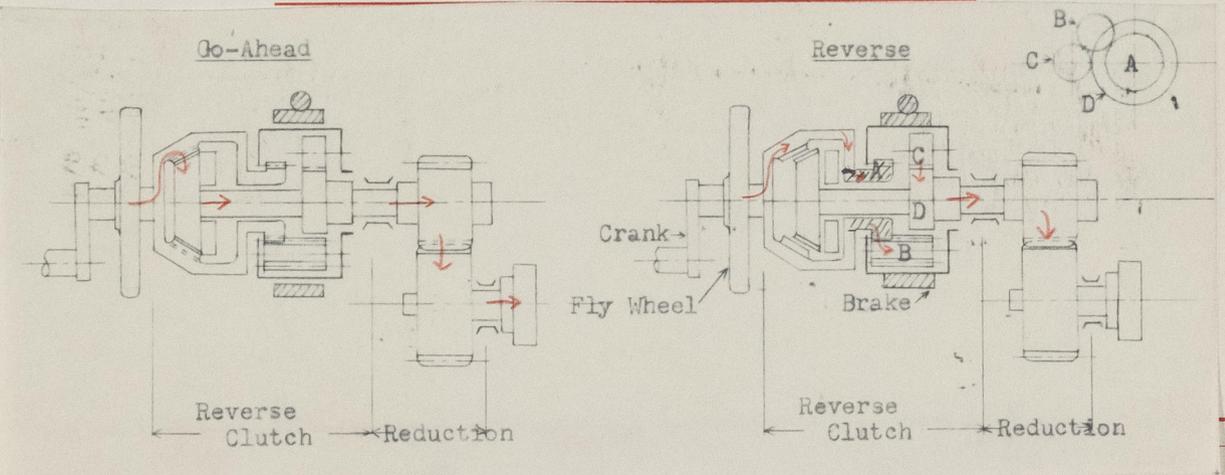
Ship's Name			Port	Yokohama
Gross tons		Date of completing rpt.	Rpt. No.	6469
Place of survey, if different from above	Tokyo			
No. of visits in shops	4	First date	20-10-65	Last date 11-11-65
Ship built by	Yokohama Yacht Co., Ltd.		Yard No.	S.535-A
Gearing made by	Tokyo Boat Inc.		Gear No.	Year
Fee	¥5250.-		Expenses	-

Description of gearing, including reversing arrangements and clutches, if any, and No. of sets. State if ball or roller bearings

Single reduction gearing, oil clutch reversing gear
Both ball & roller bearing

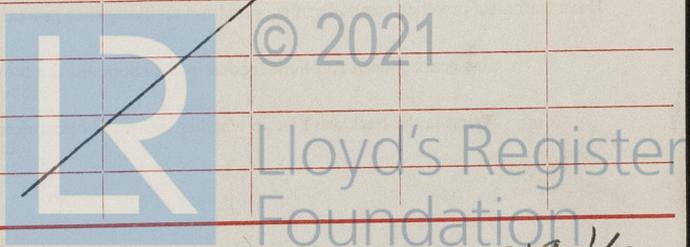
Type of engine with which gearing is to be used	4 stroke trunk piston engine	Helix angle	Primary	Double helical 22.5°
State if for Class 1 or 2 ice strengthening	-		Secondary	
If single helical, state type and position of gear thrust bearing	-	Type of tooth form	Involute	
		Approved max. total S.H.P. each set	90	
		Corresponding R.P.M. of main wheel	1150	

DIAGRAMMATIC SKETCH SHOWING ARRANGEMENT OF GEARING



Max. S.H.P. to be delivered to primary pinions	90			
Corresponding R.P.M.	2300			
Dia. of pitch circle	88 mm			
No. of teeth	22			
Total width of face parallel to axis	65 mm			
Width of gap	0			
Dia. of shaft at bearings	60 mm			
No. of bearings	2			
Span between inner edges of bearings	84 mm			
Min. approved tensile strength of material	85 kg/mm ²			

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. Wordings not applicable to be cancelled.



	PRIMARY			SECONDARY		
	H.P.	M.P.	L.P.	H.P.	M.P.	L.P.
<u>QUILL SHAFTS</u>						
Diameter						
Min. approved tensile strength						
<u>FLEXIBLE COUPLINGS</u>						
Type of coupling						
Material, driving member						
Min. tensile strength						
Material, driven member						
Min. tensile strength						

Do couplings permit axial float of pinions?

Have primary pinions with half-couplings been dynamically balanced?

Have floating parts of flexible couplings been dynamically balanced?

Have secondary pinions been dynamically or statically balanced?

WHEELS	PRIMARY			MAIN
	H.P.	M.P.	L.P.	
Dia. of pitch circle	140 mm			
No. of teeth	35			
Rim material minimum approved tensile strength	85 kg/mm ²			
Dia. of shaft at bearings	60 mm			
Dia. of shaft adjacent to thrust collar				
Min. approved tensile strength	85 kg/mm ²			

Have wheels been statically or dynamically balanced? (State which) **-**

Are bodies of cast or welded construction? **forged**

How are bodies connected to shafts? **force fit**

Material of bodies **-**

Are rims shrunk, bolted or welded to bodies? **-**

If shrunk, has the shrinkage allowance been checked and found as approved? **-**

No. and diameter of radial or axial dowels fitted **-**

How were teeth cut? **-**

If hobbed, state for hobbing machine { Makers' name **Sunderland Karatsu in Japan** Serial No. **-**

What post-hobbing process was applied? **Lapping**

Machine used for finishing process { Makers' name **Lapping Machine Okamoto in Japan** Serial No. **-**

If teeth are surface hardened state method **Case hardened with liquid and temper, and annealing**

Which gears were cut under conditions of temperature control? **-**

Is gearcase of cast or welded construction? **Cast**

If welded, has it been stress-relieved? **-**

Have trammels or other means been supplied for verifying that gearcase is free from distortion when secured in ship? **-**

Has gearing been run light/loaded in the shop and the tooth contact found satisfactory? (State maximum R.P.M. reached) **-**

What is the backlash? (state whether measured circumferentially or normal to the teeth and if in no-clearance bearings) **-**

Ship's Name

Port Yokohama

Rpt. No. 6469

If undulation records were taken, state maximum height from crest to trough and wave length and type of instrument used.

Pinions

Not measured

Wheels

-

If maximum adjacent and accumulated pitch errors normal to the teeth were measured, give particulars

Pinions

Not measured

Wheels

DECLARATION TO BE SIGNED BY GEAR MAKERS

To the best of our knowledge this reduction gearing has been soundly constructed in conformity with the Rules, Regulations and requirements of Lloyd's Register of Shipping, and the foregoing particulars (as shown on Sheets 1 & 2) of reduction gearing are correct.

(date) 2-3-66

(signature)

Factory Manager
W. L. L.

A previous similar case was for (name)

Gear No.

Port and Rpt. No.

DATES OF APPROVAL OF PLANS

26-10-65

IDENTIFICATION MARKS. (Copies of certificates to be forwarded)

(continued overleaf)

Primary pinions

KM

Primary quill shafts

Secondary pinions

Secondary quill shafts

Flexible couplings

Primary wheel rims

Primary wheel shafts



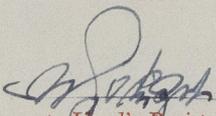
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IDENTIFICATION MARKS (continued)

Main wheel ~~rim~~ KM Integral with rim
Main wheel shaft KM

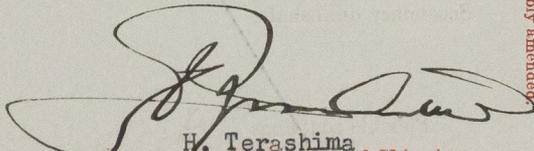
* The reduction gearing reported above has been built under Special Survey in accordance with the Rules, approved plans and Secretary's letters. The materials and workmanship are good, the spare gear required by the Rules has been supplied and the gearing is eligible, in my opinion, to be fitted in a classed ship.


Surveyor to Lloyd's Register of Shipping

* When gearing is made at a port other than the port of installation, the Surveyors at the former should send this report to Head Office as soon as possible after completion of the gearing for checking, after which it will be sent to the Surveyors at the port of installation who should attach it to their First Entry report on the machinery after completing and signing the Declaration below.

DECLARATION TO BE COMPLETED & SIGNED BY THE SURVEYOR AT THE PORT OF INSTALLATION

The above reduction gearing has been fitted on board the MS "CUST-1"
at Yokohama in a fit and proper manner and found
satisfactory when tested on (date) 28-2-66 under full-power conditions for 1½ hours
and when examined subsequently


H. Terashima
Surveyor to Lloyd's Register of Shipping

Date of Committee

Minute



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