

NEW JAPANESE RESEARCH SHIP "TANSEI MARU"

The new Japanese research ship *Tansei Maru*, for the Ocean Research Institute of Tokyo University, was launched on March 1, 1963.



FIG. 1

The following are her specifications :

Length o.a.	40.00 m
Length b.p.	35.00 m
Breadth	7.40 m
Depth	3.70 m
Gross Tonnage	257.69 tons
Net Tonnage	69.94 tons
Maximum Speed	11.61 knots
Service Speed	10.00 knots
Main Engine (4-cycle supercharged diesel)	550 BHP
Fuel Oil Capacity	80.00 m ³

Fresh Water Capacity 57.63 m³
 Complement (including 10 scientific personnel) 37

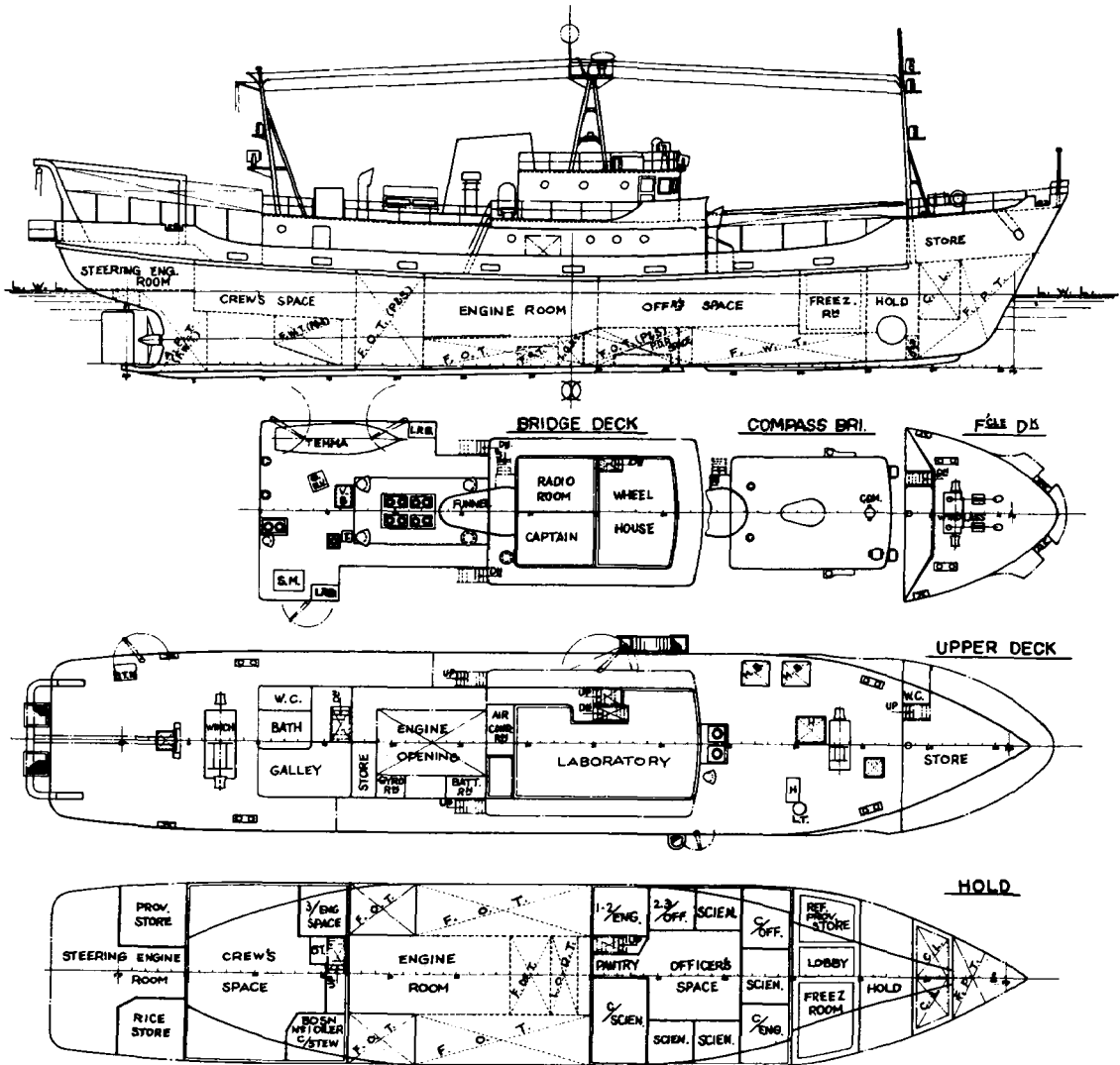
The Engine Room has a Control Console.

The propeller has three blades and variable pitch and is controlled from the Bridge Control Console.

Built by Mitsubishi, Shimonoseki Works.

NAVIGATION INSTRUMENTS

Gyro compass; Gyro compass repeater; Projector magnetic compass;
 Echo sounder; 10-inch diameter radar; Loran; Direction Finder.



General Arrangement 一般配置図

FIG. 2

RADIO INSTALLATION

Main transmitter 250 w; Second transmitter 75 w; All wave receiver; Short wave receiver; Facsimile; Public address system 30 w.

GENERATING SET

Two Main Diesel-generators 80 BHP, 55 KVA, 60 cycle, 230 V.
One Auxiliary Diesel-generator 17 BHP, 10 KVA, 60 cycle, 230 V.
One 3 kw DC Motor Generator.
3 Transformers 15 KVA.

PRINCIPAL AUXILIARY ENGINE

Two air compressors, and various water and fuel pumps.

The ship is equipped with an air-conditioning system.

To facilitate her handling she is fitted with a bow thruster housed in a Propeller Tunnel.

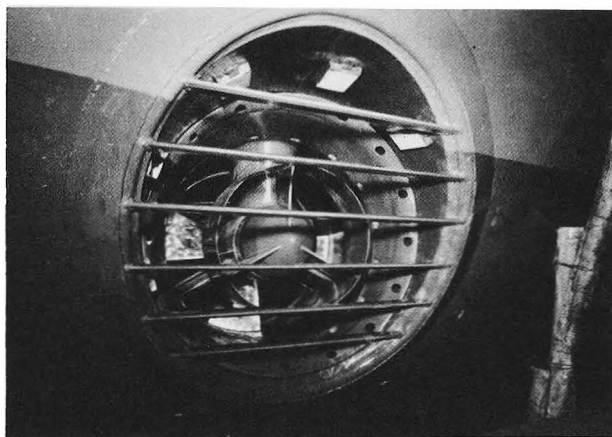


FIG. 3

RESEARCH FACILITIES

1. 10 000 m Hydrographic winch.
2. Davit for above.
3. Linehauler.
4. Magazine boxes for explosives.
5. Laboratory.
6. 1 000 m Hydrographic winch.
7. Davit for above.
8. 0.6 ton Derrick.
9. Deep sea winch (6 000 m) or Trawl winch (1 000 m \times 2).

- 10. G.E.K. or Net vision winch.
- 11. B. T. winch.
- 12. Gantry.
- 13. Centre Girder.
- 14. Meteorological observation boom.
- 15. Nansen bottle rack.

1. 研究設備配置 Research Facilities

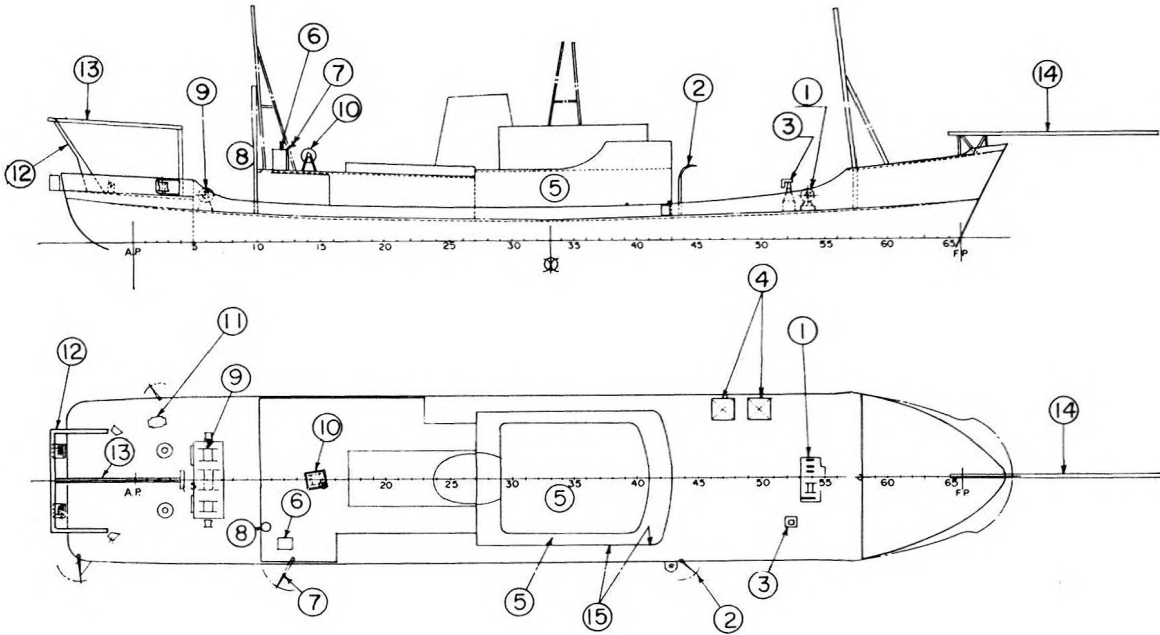


FIG. 4

WINCHES

Hydrographic winch 10 000 m, 20 BHP

Wire :

Length	Diameter
4 000 m	3.3 mm
2 000 m	4.1 mm
1 700 m	4.6 mm
1 300 m	5.0 mm
1 000 m	5.5 mm

Wire weight : 702 kg.

Maximum load : About 1 500 kg.

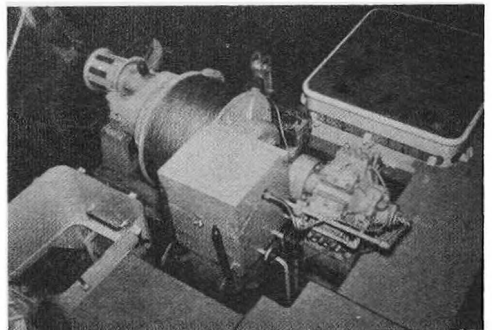


FIG. 5

Reeling speed :
 with maximum load : 0.85 m/sec.
 with minimum load : 2.40 m/sec.

Hydraulic drive.

Deep Sea winch : 6 000 m, 30 BHP.

Wire : Length 6 000 m; Diameter 9.14 mm

Wire weight : 1.9 tons.

Strength : 6.1 tons.

Maximum load : 2 500 kg.

Reeling speed :
 maximum load : 0.47 m/sec.
 minimum load : 1.0 m/sec.

Hydraulic drive.

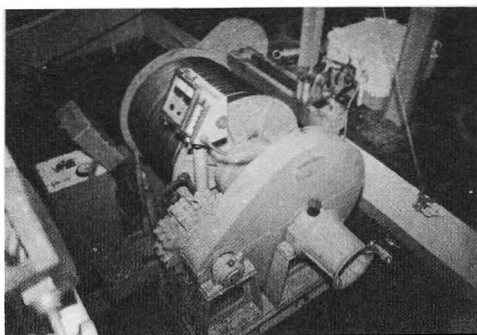


FIG. 6

Hydrographic winch : 1 000 m; 5 BHP.

Wire : Length 1 000 m;

Diameter 4 mm.

Hydraulic drive.

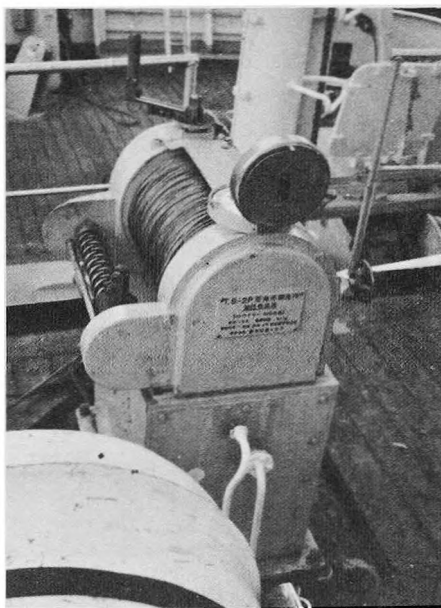


FIG. 7

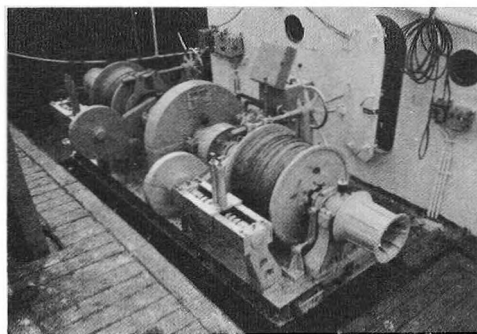


FIG. 8

Trawl winch : 30 BHP.

Wire : Length $2 \times 1\,000$ m;
 Diameter 10 mm.

Weight : 430 kg.

Strength : 7.3 tons.

Maximum load : 3.0 tons.

Reeling speed : 0-0.4 m/sec.

Hydraulic drive.

Netvision (or G.E.K.) winch : 5 BHP.

Maximum load : 250 kg.

Reeling speed :

maximum : 2.5 m/sec.

minimum : 0.2 m/sec.

Drum speed : 60 rpm.

Hydraulic drive.

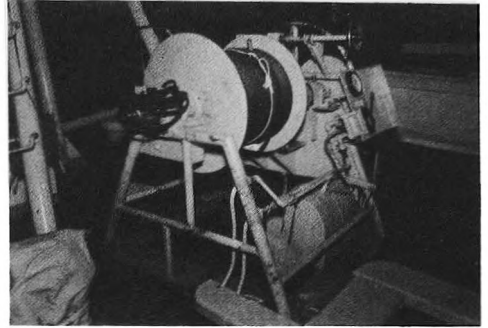


FIG. 9

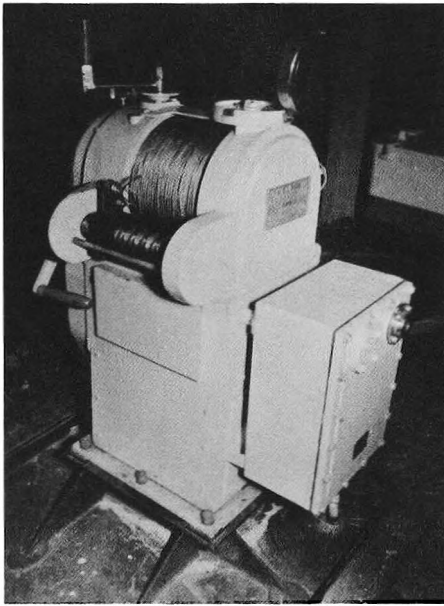


FIG. 10

B.T. Winch : 2 BHP.

Motor drive.

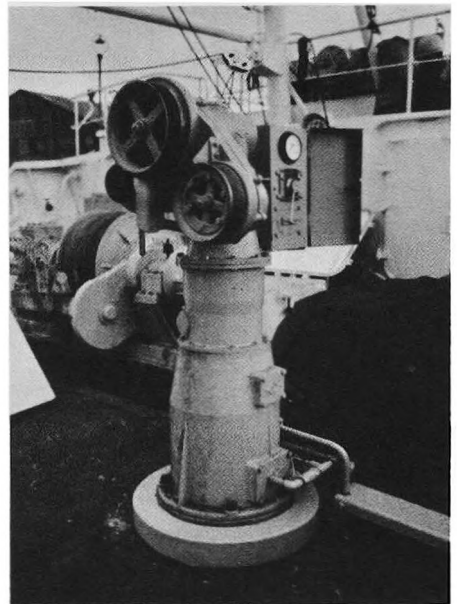


FIG. 11

Linehauler : 10 BHP.

Hydraulic drive.

DEEP SEA ECHO SOUNDER

Precision Depth Recorder (P.D.R.)

Range : 30-13 000 m.

Accuracy : 1/5000.

Frequency : 10 kc.

Beam angle : 7°.

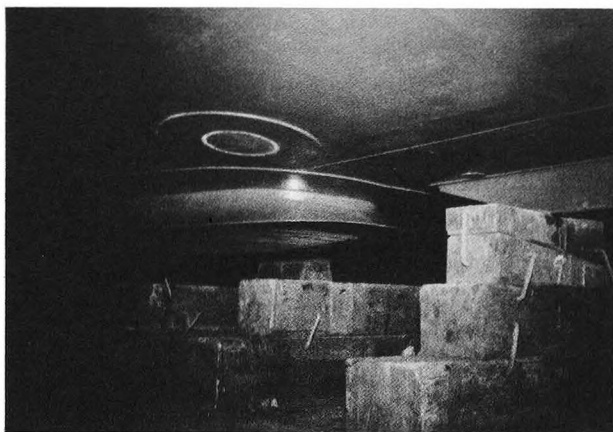


FIG. 12

Shallow water echo sounder :

Range : 0-10 m; 0-100 m.

Accuracy : 1/1000.

Frequency : 200 kc.

Beam angle : 3°.