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Organisation de Coopération et de Développement Economiques
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COUNCIL
WORKING PARTY ON SHIPBUILDING

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THE CURRENT DEVELOPMENT OF INDONESIAN SHIPBUILDING INDUSTRY AND ITS SUPPORTING FACILITIES ON TECHNOLOGY ASSESSMENT

(Paper by Indonesia)

This document, prepared by the Agency for the Assessment and Application of Technology of the Republic of Indonesia, will be presented at the first session of the Workshop with non-member economies on shipbuilding policies to be held on 18-19 December 2006.

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THE CURRENT DEVELOPMENT OF INDONESIAN SHIPBUILDING INDUSTRY AND ITS SUPPORTING FACILITIES ON TECHNOLOGY ASSESSMENT

Agency for The Assessment and Application of Technology
Republic of Indonesia

OECD - WORKSHOP ON SHIPBUILDING POLICY
Paris – France, December 2006

Introduction

- Indonesian shipbuilding industry is in developing stage
- The market of shipbuilding industry is tightly related with the shipping industry, for 5 years ahead promising
- Currently the international shipbuilding capacity is fully booked due IMO reg. of double hull construction
- Number of Indonesian shipyards have potentially competitive in international level

Shipbuilding Facilities

1. Number of Shipyard : 240 companies
2. Number of facility
   - Building berth : 153 units
   - Floating dock, slipway, graving dock, shiplift : 208 unit
3. Capacities :
   - Building berth (for new building) :
     up to 50,000 DWT (PT PAL Indonesia & PT Dok Perkapalan Kodja Bahari)
   - Floating Dock (for Repair works) :
     up to 65,000 DWT (PT Karimun Sembawang shipyard)

Building Capacity

No	CAPACITY	REPAIR FACILITY		NEW BUILDING FACILITY	
		Capacity / Year		Capacity / Year	
		GT	DWT	GT	DWT
1	501-1000	495000	742500	17000	25500
2	1001 – 3000	455000	682500	10000	15000
3	3001 - 5000	400000	600000	26000	39000
4	5001 – 10000	900000	1350000	41000	61500
5	> 10000	870000	1305000	110000	165000
TOTAL		3120000	4680000	204000	306000
UTILIZATION		70 %		28,60 %	

Source : BPS-Indonesia

Ship Production

Price (x 1000,000 USD)

Activities	1998		...	2003		2004	
	Volume (GT)	Price	...	Volume (GT)	Price	Volume (GT)	Price
New Build Ship	110.090	40.7	...	47.250	118	58.275	146
Repair work	1,750,000	27.6	...	2,600,000	45	2,450,000	47
Total		683	...		1.620		1.925

Source : BPS-Indonesia

Experiences

- Ferry Ro-Ro 19.000 GT (Sweden)
- LPG carrier 30.000 DWT (Germany)
- Bulk carrier 50.000 DWT (Germany, Turk, Italy, Hongkong)
- Oil tanker 30.000 DWT (Domestic)
- Container 1.600 TEUS (Domestic)
- General Cargo & Semi Container 4180 DWT (Domestic) etc

Market Opportunity

- Market
  - Global market
    - Bulk Carrier up to 50.000 Dwt
    - Tanker up to 30.000 DWT
    - Container up to 2.000 TEU's
    - Dry Cargo Vessel etc
    - Total World Order Book for General Cargo Ship : 226,000,000 DWT
  - Domestic market
    - Container, Ro-ro Ferry, Fishing Vessel, Tanker, Passenger ship, Military ships etc.
    - Up to FY 2009, Container : 80 units, General Cargo : 800 units, Tanker : 132 units, Bulk carrier : 30 units, Passenger ships 50 units, Ro-Ro : 50 units, etc (Source : Hubla-Indonesia).
- Capacity Gap
  - National yards capacity/ Yr for New building ship : 180,000 DWT (< 1 % of World Order Book 2004)

Supporting facility and Technology Assessment

- Improvement of shipbuilding facility
  - Ship Design Center, Productivity improvement & Measurement Center, Welding Technology Center, Hydrodynamic Laboratory.
  - Dock yard and yard's equipment
- Shipbuilding cluster program
- Improvement ship supporting industry

MAIN FACILITIES

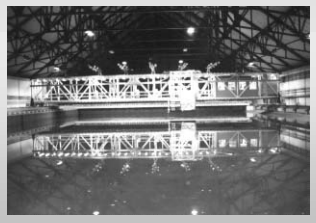
Towing Tank : dimension : 235.4 m x 11 m x 5.5 m, completed with regular & irregular wave generation facility.

Resistance, Propulsion test, *captive sea-keeping test*.

Maneuvring & Ocean Engineering Basin)

Deep basin 60 x 35 x 2.5 m & Shallow water basin 45 x 35 x 1.25 m, completed with wave generation facility.

S*ea-keeping* and Manoeuvring test of model ship and offshore structure

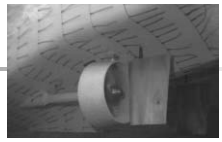


Cavitation Tunnel
Closed circuit type, dimension : 0.85 x 0.85 x 4 m.

Propeller model test, *nozzle*, rudder, hydrofoil etc

Supporting Facility : Hydrodynamic Laboratory and its activities

Captive Seakeeping Test,
Model Fast Patrol Boat



Tuff Test, Model Tug Boat 35 m
(ABG Shipyard, India)

Resistance & Propulsion Test
Model Research Vessel - PT.PAL

Seakeeping Test,
Model Tanker 6500 DWT
(Niigata Co., Japan)

Field Test of Coal Carrier
In Sebuku water, Kalimantan
(PT. Bahari Cakrawala Sebuku)

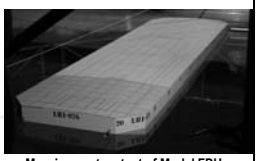
Resistance & Stability Test
Model Dive Support Vessel 83.5 m
(ABG Shipyard, India)

Container ship
Palwa Buana 600 TEUs – Bremer
Vulkan, Germany

Resistance & Propulsion Test,
Model Container ship
PT PAL Indonesia

1995 1997 1998 2000 2003 2005

Supporting facility : Hydrodynamic Test of Model Offshore Structure



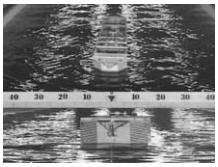
Mooring system test of Model FPU,
EMP Kangean, Ltd
(location : Kangean, Madura)

Transportation of FPSO
To Belanak Field, Natuna

Instalation of FPU
in West Seno, Makassar strait

MoGPU pada tahap transportasi
ke Hang Tua Field, Natuna

Mooring system Test,
Model FSO-SEMPEC PETRO CHINA
(Betara Field, Tg. Jabung, Jambi)



Towing Test & seakeeping
Model FPSO-Conoco-Halliburton,
Singapore
(Belanak Field, Natuna)

Motion & Mooring Test,
Model FPU-UNOCAL
(West Seno, Makasar strait)

Instalation & Transportation Test,
Model MoGPU-CONOCO
(Hang Tuah, Natuna water)

1995 1997 1998 2000 2003 2005