

Implementation of Production Based Learning



Shipbuilding Institute of Polytechnic Surabaya **SHIPS**

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BRIEF PROFILE OF SHIPS

- A leading and the only state-polytechnic focusing on shipbuilding and technology of marine-related industries.
- High demand of qualified higher technicians in ship manufacturing sector



SHIPS Main Building



**Collaboration with Ministry of Education
and Ministry of Manpower and Transmigration**



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CORE BUSINESS



EDUCATION



RESEARCH



TRAINING
AND
CERTIFICATION



SERVICES



PRODUCTION



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STUDY PROGRAMS

STUDY PROGRAM OF D4

- 1. SAFETY ENGINEERING**
- 2. WELDING ENGINEERING**
- 3. PIPING ENGINEERING**
- 4. DESIGN AND MANUFACTURE ENGINEERING**
- 5. AUTOMATION ENGINEERING**

STUDY PROGRAM OF D3

- 1. SHIPBUILDING ENGINEERING**
- 2. SHIP DESIGN AND CONSTRUCTION ENGINEERING**
- 3. MARINE ENGINEERING**
- 4. MARINE ELECTRICAL ENGINEERING**



EDUCATION IN SHIPS

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- Apply **Teaching Factory** and **Link and Match** concepts (38 hours, 5 days a week)
- Curriculum : 50% theory and 50% practice
- 5 months On the Job Training (OJT)
- SHIPS have 1900 student bodies, with 650 graduates per year
- Every graduate has competency certificate related to their field





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ISSUES

- Developing the implementation of Indonesian Qualification Framework (IQF)
- Build teaching materials with an economic value
- Maintain the link between education and the industries through product development





OBJECTIVE

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- Increasing education relevance to industrial needs
- Empowering good possessed equipments
- Building professional teaching staff and technicians
- Bringing in industrial culture in to school
- Fund generating, but still “not for profit organization” in mind





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RATIONAL

- Utilization of equipment will produce qualified graduates, and good products
- Implementation of production will end up with the establishment of entrepreneurship
- Utilization of equipment for production requires good equipment to assure best product
- Life cycle of product is getting shorter, keep the school updated



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CHALLENGE

- Keeping mutual relationship with industry
- Keeping qualified teaching staff and good instructor
- Keeping curriculum of the school updating to industrial needs
- Keeping equipment functioning and updating
- Less attractiveness of small size of ship for the majority of shipyard





STAKEHOLDER and ROLES

Issue	Stakeholders	Role
1	TVET institutions	Producing high skilled graduates and valuable products
2	Industries	Feedback for the quality of employability improvement, motivating to upgrade the graduates competencies
3	Ministries	Funding, Policies, and Law umbrella
4	Communities	Common feedback
5	Local government	Mapping for local potentials and competitiveness



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TEACHING FACTORY

BOAT PRODUCTION



Shipbuilding Institute of Polytechnic Surabaya (SHIPS)
Surabaya, Indonesia
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TEACHING FACTORY



FIBER BOAT PRODUCTION



WOODEN BOAT PRODUCTION



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SERVICE AND PRODUCTION





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SERVICE AND PRODUCTION



CNC Machine



CNC Milling Process



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SERVICE AND PRODUCTION



Converter Kit



Mooring Bouy



Thank You

Terima Kasih