

# IO Highlights

## Culinary Practice & Friendly Brunch at SMK 8 Surabaya

In order to introduce Indonesian tasty and delicious traditional foods and drinks, ITS International Office and SMK 8 Surabaya invited international students to traditional culinary party to let them cook Sate, Rujak, and Nasi Goreng. Everyone looked very happy and enjoyed the brunch after preparing the meals together.



## A Visit to Kindergarten and Elementary School



ITS International Office also encourages international student to promote cultural understanding and awareness to local people. We managed a visit TK Sepuluh Nopember (kindergarten) and SDLB Tegalsari (Inclusive Elementary School) to engage international students to our community and to introduce Indonesian early years education system.

## Flower Parade, Anniversary of City of Surabaya

International students attended the anniversary of Surabaya city and enjoyed the cultural and flower parade played by local citizens. During this event, the students managed to meet the city mayor of Surabaya, Tri Rismaharini.



## Angklung Rehearsal and Performance at ITS Events



International students performed an amazing Angklung show, a traditional musical instrument from Indonesia in ITS Expo and Mlaku-Mlaku Nang Tunjungan event (ITS's anniversary), the annual party of ITS students. They have been rehearsing routinely and the performance was just great and stunning.

## FS<sup>2</sup>, A moment of Sharing from ITS Returnees

Returnees of exchange programs have been actively sharing their experiences during staying abroad through From Student, For Student (FS<sup>2</sup>) program. Faisal (Canada), Ivana (Korea), Yudha (Thailand), Pak Bagus (French), Amalia (Taiwan), and Fathia (Thailand) have helped to spread their spirit to others.



## Ijen Trip for Volunteers and Exchange Students

Everyone looked enthusiastic during the trip to Ijen Crater, one of the most beautiful sceneries in East Java. The trip, which takes place on the weekends of 18-19 January 2014, was participated by both volunteers of ITS International Office and exchange students. The sense of togetherness and hospitality has been fueling this group of international people.



## Internationalization Workshops and Seminars

ITS has been promoting the spirit of being a part of international community for several years by now. This year, the programs have been intensified and diversified for every stakeholder. Specially-designed workshops for students, non-academic staffs, and faculty members have been conducted routinely to make sure everyone is ready for international recognition.



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# io opener

THE ITS WINDOW TO THE INTERNATIONAL WORLD



## Hello from ITS

A warm greeting from Head of Innovation and Business Venture Agency (BIBV) of ITS

Raja Oloan Saut Gurning, ST., M.Sc., PhD.

BIBV is ITS Innovation and Business Venture Agency. The main function of BIBV ITS is to support all units in ITS to contribute to more relevant and better quality innovations in the development of science, technology and arts. These contributions are not limited only to the national-wide demand but can also be expanded to the regional and international needs. In other words, BIBV-ITS is a coordinating agency that facilitates various collaboration programs in training, research, and innovations in science, technology and arts; particularly for those who have high intellectual property right and business venture values.

All activities of BIBV are fully funded by operational budget from ITS. This year, ITS has committed to allocate one per mil (0.001) of its revenue for various industrial collaborations as the allocation budget for BIBV. All potential collaborations in various formats such as projects, consultations, assessments, design/analysis, or laboratory analysis are initiated either by our partner inquiries or as results of our marketing efforts. Once the contractual document is settled for the activities, the Vice Rector for Research, Innovation, and Collaborations provides a formal assignment letter for the project team and assigns BIBV to monitor those activities regularly over the time of project period. Some of our collaborating projects are handled with international partners. Almost 10 percent of 402 projects that we had in 2013 were undertaken with international partners. This indicates the recognition of ITS expertise and professionalism both in regional and international scales. Indeed, ITS gives contribution to the national development and also has strong relationship with industries by its active engagements to answer the needs of real businesses.

BIBV will continuously endeavor to expand our national and international business networks and partners in the years ahead including research, consultancy, industrial and community services. By expanding the scope and maintaining the quality of services, BIBV tremendously support the vision of ITS to be a science and technological university with national and international reputation.

## Editorial

This edition of IOpener will provide a quick resume about how ITS has strived to be one of the leading universities with active engagement with industries. Referring the engagement as University-Industry (U-I) Linkage, this issue will provide several latest news related to collaborations, projects, consultations, and trainings performed by ITS to serve the needs of industries in regional, national, and inter-national community. Here, we also explicate several highlights about our campus, international student activities, and upcoming internationalization events.

ITS International Office (IO) team

## Quick Recap

### Jalapatih, A Solar-Powered Boat, Is Ready to Compete



A dream of making a solar-powered boat has been put into reality. Marine Solar Boat Team, a group of students of Faculty of Marine Technology of ITS, has created a solar-powered boat named 'Jalapatih'. This boat will be competing in Dong Energy Challenge

2014 in The Netherlands. A nice reception is obtained from the Governor of East Java province. He wishes to have a further collaboration with ITS in order to produce the boat for fishermen.

### ITS Electric Cars Conquer Tour De Java

It has been a long time for Indonesia waiting for a breakthrough in transportation technology started. Coming out with its electric cars named Ezzy I and Ezzy II, ITS broke the ice of alternative energy for car skepticism. The cars have underwent Tour De Java, a round trip of 800 km distance departing from Surabaya, visiting several big cities along the island, and heading back to Surabaya. The fleet arrived back on Surabaya and was welcomed with ceremonial reception. The Surabaya City Major, Tri Rismaharini has confirmed to order one of the cars for work. However, there is still a long way to go to get those cars ready for mass production.



Source: ITS Official Website, www.its.ac.id

## Upcoming Events

**CommTECH Camp (for students)**  
25 August - 2 September 2014

**ITS Goes Global (for staffs)**  
September 2014

**ITS Staff Internship Program**  
September 2014

**ITS Students Internationalization Project Competition**  
October 2014

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1 Hello from ITS

1 Editorial

1 Quick Recap

2 U-I Linkage

4 IO Highlights

4 Upcoming Events



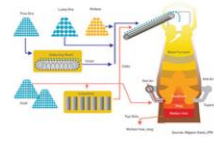
## In this edition:

**Engineering Conversion FSO/FPSO – China National Offshore Oil Corporation (CNOOC)**



Ship Design Laboratory (SDL), Department of Naval Architecture and Ship Building Engineering have been involving in marine industrial consultancy for various projects related to construction of floating structure. One of unique projects was preparing drawings and supporting calculations for conversion of trading tanker into FSO/FPSO.

**Blast Furnace Simulation in Iron & Steel Industry – PT Krakatau Steel (Indonesian Steel Manufacturing)**



Indonesia is rich of mineral and mining resources such as gold, silver, and iron ore. However, domestic mining industries are not equipped with adequate capacity whereas demand from industries are quite high. Therefore, Krakatau Steel had chosen ITS to simulate the performance and examine critical factors in building and operating the high volume blast furnace.

**Design of New Suzuki Grand Vitara – Suzuki (Car Manufacturing)**

Indonesian car market has been very attracting for foreign industries. Responding to this, a continuous assessment and improvement in car design has been one thing to focus by car maker companies. Collaborations with industry for designing cars have been established to produce a profitable design.



# University **LINKAGE** Industry

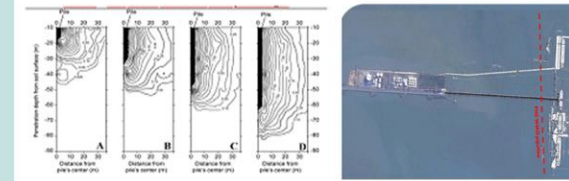
Sources: ITS Research Catalog, BIBV Website - bibv.its.ac.id.

**Conceptual Design of Passenger Ship Modification into 3-in-1 Ship – PT PELNI (National Passenger Ship Transportation)**



The basic idea of this collaboration is how to modify the passenger ships of PT PELNI (National Passenger Ship Transportation) into passenger-goods-vehicle ships.

**Risk Assessment of Subsea Gas Pipeline – PT PHE WMO (Oil and Gas Company)**



ITS as a leading national centers for marine research has involved in the risk assessment of subsea gas pipeline many times.



**Heat Exchanger Design for Electricity Generator – PT Pembangkit Jawa Bali (Power Generator)**

One of memorable U-I Linkages was the collaboration between ITS and PT. PJB (Pembangkit Jawa Bali). This giant company provides electricity for Indonesia's most populated islands, Java and Bali. The electricity generator plant is located in Probolingga, East Java. In 2009, the company faced a serious problem of their heat exchanger. They tried their best to fix but all goes to no significant results. Calling and consulting to the university was the most possible way. ITS was chosen, and a group of mechanical experts was formed. Led by Prof. Prabowo, this group consisted of material expert, manufacturing process experts, heat transfer effects experts, and ITS students. The ITS team independently worked on the project without assistance from foreign experts. Heat efficiency of heat exchanger was the main concern. Started in 2009, the team accomplished their project in 2010. The result was unexpectedly better than the design. In 2011 the company called back and ordered for another 5 heat exchangers to ITS. ITS Team needed another one year to manufacture and fabricate to satisfy the demand. Those heat exchangers are expected to have a lifetime of 15 years.

The project's effect is very tremendous and boosted the industry's trust to ITS. "This success has proved that university is not only book-maker institution, but also the home of solvers of the real problems", Prof. Prabowo said. Those kinds of U-I linkage also offer a field experience to lecturers and students of ITS. As a leading technology-based institution, ITS has been producing many experts in engineering and scientists.



**Semen Indonesia Award on Innovation – SmlAI or SIAI – PT Semen Indonesia (Indonesian Cement Industry)**

Led by Dr. Ahmad Rusdiansyah, along with several other experts consisting of lecturers, technicians, and assistants, Dr. Ahmad Rusdiansyah builds what is called KnowVation. KnowVation is a group of professional consultants in building Corporate Knowledge and Strategic Management.

"Our mission is to assist companies to transform their knowledge into profitable innovations in our systemic way, an approach we refer to as KnowVation Framework. We also have developed several application systems including Innovation Management System (IMS), Continuous Improvement Management System (CIMS), Performance Management System (PERFORMS) for Public Services including Higher Education. We have implemented KnowVation Framework for developing Semen Indonesia Awards on Innovation (SmlAI) for Semen Indonesia Group, the largest Cement Holding Company in Asia. We assisted the corporate which consists of Semen Indonesia, Semen Padang, Semen Tonasa and Than Long Cement (Vn) to develop their Innovation Management System from 2009 to present (2014)"

Through this program, Semen Indonesia has been able to promote innovation spirit and transform knowledge assets into corporate innovation. "Semen Indonesia Award on Innovation (SmlAI) is a stimulant for new innovation creation in our company. We believe and realize that innovation is the most important pillar in business development and sustainability in this more competitive market", Dwi Soetjipto, the company General Director stated. This cooperation has resulted in more than half a trillion cost saving, a tremendous efficiency improvement for company.

**Satellite Portable Earth Station – DIKTI (Directorate General of Higher Education, Ministry of Education and Culture) & LAPAN (National Institute of Aeronautics and Space Indonesia)**



The development of satellite marked the new era in information and communication technology. DIKTI, together with LAPAN (National Institute of Aeronautics and Space of Indonesia), have established IINUSAT projects involving several big universities in the country to develop pure Indonesian-designed-and-made nano-satellite.

**Other Forms of U-I Linkage**

**Business Consultancy for Cement Industry (PT Thang Long, Vietnam)**

**Route Planning Software Consultancy for Fuel Truck (PT Pertamina)**

**Construction Planning of Refinery Natural Gas in Gresik (PT ARSynergy Resources)**

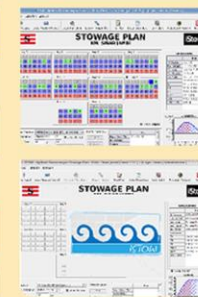
**Fluid Bed Dryer Productivity Evaluation and Improvement (PT. Sumatraco Langgeng Makmur)**

**Pipeline Risk Assessment River Crossing (PT. Rekayasa Engineering)**

**Waste Treatment Training for Energy Industry (PT. Star Energy Geothermal Ltd)**

and many more

**Implementation of Stowage Planning Application – PT Indonesia Ferry (Transportation Company)**



The operation of national shipping is still dominated by manual activities, which has potential human errors. Cooperating with PT Indonesia Ferry, ITS Team developed a Stowage Planning Application to enable more optimal loading and hence increasing the productivity and safety. This is expected to enhance competitive advantage of PT Indonesia Ferry to handle the growing market needs.

**Supply Chain Management Training – PT Badak NGL (Oil and Gas Company)**

Regular training for PT Badak NGL is one form of industrial engagements performed by ITS. Started back in 2007, PT Badak NGL actively sought consultation from ITS experts on various managerial concepts, especially those related to Supply Chain Management. Led by Prof. Nyoman Pujawan, the professor of supply chain engineering, ITS experts conducts annual training for PT Badak's staffs in Surabaya. This collaboration has been established and will be tightened up in the future.

