





THAI-FRENCH INNOVATION INSTITUTE

สถาบันนวัตกรรมเทคโนโลยีไทย - ฝรั่งเศส มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ



- **☑** Testing and Inspecting
- ☑ Inventing and Producing
- **☑** Researching and Developing
- **☑** Industrial Consulting

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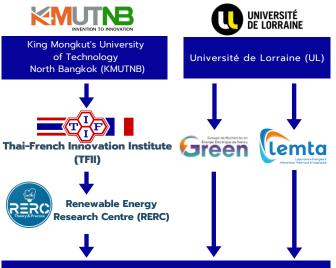








Research Cooperation with French Partners



Electrical Engineering - Thai French **Research Center (EE-TFRC)**

Research and Technology Transfer Department

TFII has established a Renewable Energy Research Center (RERC) by collaborating with the GREEN Research Center which is supervised by the Université de Lorraine (France), for and developing new knowledge, especially technology electrical energy production, transmission, and accumulation by integrating alternative energy sources such as fuel cells, solar, and wind energy for homes, offices, and industries in the near future.





The laboratories aim to provide academic services in terms of teaching and learning, including research for the graduate students that collaborate with the Université de Lorraine. The Dual Degree Program in Electrical and Energy Engineering has been launched since 2016 through the collaboration between the Université de Lorraine and the Faculty of Technical Education, KMUTNB.







Partners : Schneider





UNIVERSITÉ DE LORRAINE



































Phone: 062 509 7983

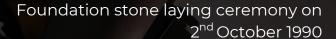
Email: customers@tfii.kmutnb.ac.th Website: https://tfii.kmutnb.ac.th

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Thai-French Innovation Institute









TFII's 6 Departments

Welding Technology Department (WD)

The Welding Technology Department is supported by L'AIR LIQUIDE Group by providing machines, equipment, scholarships, and personnel training for transfer technology. In 2001, L'AIR LIQUIDE Group, together with Institut de Soudure, arranged training classes for producing welding engineers and welding technologists for Thai Industries.

Furthermore, the Welding Technology Department also has a non-destructive inspection course, for example, ultrasonic inspection based on the ISO 9712 standard. Additionally, the Welding Technology Department provides services in testing, inspection, calibration, consultation, and certification of welding system quality.

Corrosion Technology Department (CR)

The Corrosion Technology Department under TFII signed an MOU with PTT Exploration and Production Public Co. Ltd. and TOTAL E&P Thailand. In order to set up the nation's first inhibitor testing laboratory. The laboratory provides testing of chemical corrosion inhibitors used by the oil and gas industries. The Department has the knowledge, expertise, and tools. For analysis, inspection, testing, consulting, and training in metal corrosion in various industries. In addition, it is an agency appointed to inspect the mortar industry to control the corrosion of structural steel in concrete (TIS 3029-2563).

Electrical and Energy Technology Department (EN)

The Electrical and Energy Technology Department offers varied consultations for industries. A few examples include issues with electric power systems, troubleshooting, and solutions for motor and drive problems. The department of electrical technology and energy has been certified by the Skill Development Institute 13 (Bangkok) to be a labor skill testing center by the Thai-French Innovation Institute to carry out the testing of the National Skill Standards in the fields of electricians, electronics, computers, and the electrician in the building, level 1, and the air conditioning in the home and small commercial building level 1.

Research and Technology Transfer Department (RD)

Research and Technology Transfer Department in active collaboration with the University of Lorraine by establishing the Renewable Energy Research Centre to carry out a joint research project in renewable energy and energy management. There are many research papers that were presented at academic conferences and published in national and international academic journals. TFII has laboratories for providing academic services to graduate students, and we also cooperated with the Université de Lorraine to establish a laboratory for teaching and learning for the students of the Dual Degree Program in Electrical and Energy Engineering between the Université de Lorraine and KMUTNB.

Computer for Industrial Applications Department (CI)

The Computer for Industrial Applications Department was initiated in support of the application of computer-based services for industries, such as computer-based training, computer-based integrated learning systems, personalized research support, and consultation sessions.

Automated Manufacturing Systems Department (AD)

Automated Manufacturing Systems Department, in association with Schneider (Thailand), set up the Automated Manufacturing and Energy Conservation Laboratory. The endeavor provides services and delivers sustainable training support to personnel in academic and industrial settings.











Welding Technology Department International Welding Courses

The Welding Technology Department has been certified by the Welding Institute of Thailand (WIT) to provide training services for various levels of welding engineering as described in the regulations of the International Institute of Welding (IIW), which has 70 countries around the world as members and is recognized internationally.

- International Welding Engineer (IWE)
- International Welding Specialist (IWS)
- International Welding Practitioner (IWP)
- International Welding Inspection Personnel: Comprehensive (IWI-C)

WELDING INSTITUTE OF THAILAND (WIT)

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CENTER OF EXCELLENCE ELECTROCHEMISTRY & CORROSION TECHNOLOGY



- ▶ TFII established the nation's first inhibitor testing laboratory, dedicated to testing chemical corrosion inhibitors used in the oil and gas industries. Equipped with specialized knowledge, expertise, and tools, the laboratory offers analysis, inspection, testing, consulting, and training services focused on metal corrosion across various industries.
- In 2024, TFII established "Center of Excellence for Electrochemistry & Corrosion Technology" for metal packaging research and Testing.





TFII-SCHNEIDER ELECTRIC CENTER OF EXCELLENCE











Module 1A - Industrial Installation, controls, drives and basic automation

Module 2A - Industrial automation

Module 3A - Industrial communication and SCADA

Module 2E - LV panel Installation and wiring

Module EV1 - Electric Vehicle charging

