

Assignment Letter/Surat Tugas

No. AL/FEIT/087A/III/22
 Date March 15, 2022
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 Doc. Type Main Document / *Dokumen Utama*

Dena Hendriana, B.Sc., S.M., Sc.D

Activity Assignment

Penugasan Kegiatan

Dean of the Faculty of Engineering and Information Technology

Dekan Fakultas Teknik dan Teknologi Informasi

In consideration of:

His appointment as the Dean of the Faculty of Engineering and Information Technology under agreement no. SK/017/Y-SGU/VIII/2018

Mengingat:

Pengangkatannya sebagai Dekan Fakultas Teknik dan Teknologi Informasi di bawah perjanjian no. SK/017/Y-SGU/VIII/2018

Herewith permits to

Dengan ini menugaskan kepada

Name/*Nama:*

Dena Hendriana, B.Sc., S.M., Sc.D

Position/*Jabatan:*

Head of Master of Mechanical Engineering Department/
Kepala Program Studi Magister Teknik Mesin

Faculty/*Fakultas:*

Engineering and Information Technology/ Teknik dan Teknologi Informasi.

To become a trainer on the following activity below:

Untuk menjadi pelatih pada kegiatan berikut dibawah ini:

No	Activity / <i>Kegiatan</i>	Organizer / <i>Penyelenggara</i>	Day & Date / <i>Hari & Tanggal</i>	Venue / <i>Tempat</i>
1.	European Energy Management (EUREM) training 2022	SGU – EKONID	March 18 th 2022 until June 25 th 2022	SGU Campus

The Appointed shall accomplish the task in responsible ways in line with the related guidelines and other regulation given by SGU.

Pihak yang bersangkutan harus melaksanakan tugas dan tanggung jawab sebaik-baiknya, sesuai dengan petunjuk dan peraturan dari SGU.

Assignor / Pemberi Ijin:



Dr. Maulahikmah Galinium, S.Kom., M.Sc

Dean of Faculty Engineering and Information Technology
Dekan Fakultas Teknik dan Teknologi Informatika

Certificate of Appreciation

This certificate is proudly awarded to

Dena Hendriana, Sc.D.

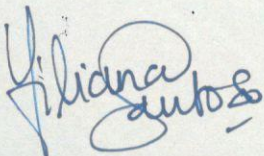
as **Trainer** in the

EUREM ENERGY MANAGEMENT TRAINING

18th March 2022 until 25th June 2022

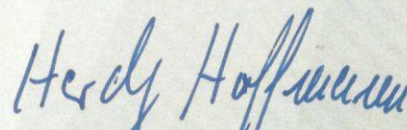
Tangerang, 25th June 2022

SGU



Dr. rer. nat. Filiana Santoso
Rector

EKONID



Hardy Hoffmann
Head Training & Education Department



Dena Hendriana, B.Sc., S.M., Sc.D

PROCESS HEAT, STEAM, HEAT RECOVERY

AGENDA

SYSTEM ANALYSIS

PROCESS OPTIMIZATION

OPERATING MODE

HEAT RECOVERY

CLOSING

SYSTEM ANALYSIS

PROCESS OPTIMIZATION

OPERATING MODE

HEAT RECOVERY

CLOSING

Definitions

Process heating is a **significant source of energy consumption** in the **industrial and manufacturing sectors**, and it **often results in a large amount of waste heat** that is discharged into the atmosphere. **Industrial process heat recovery effectively recycles this waste heat**, which **typically contains a substantial amount of thermal energy**.

Multiple benefits of heat recovery

- economic
- resource (fuel) saving
- environmental

Recovered heat can directly substitute for purchased energy, thereby **reducing the facility's energy consumption and its associated costs**. Heat recovery can produce **environmental benefits** through **reductions in emissions of greenhouse gases and atmospheric pollutants**.

While the **type and cost-effectiveness** of a heat recovery system are **dependent on the process temperature** and the **facility's thermal requirements**, many **heat recovery techniques** are **available** across **low, medium, and high temperature ranges**.

Examples



- Boiler
- Cement Kiln
- Heat Exchanger



[EUREM Training](#)[EUREM Network](#)[EUREMnext Project](#)[Contact](#) English

EUREM-Training Content

1. Energy technical basics

- > scientific Basics
- > structure of energy systems and typical optimization strategies
- > Measurement and Control (MCR)



2. Project management

- > development of a project concept
- > presentation of the project concept
- > project controlling



3. Economic calculation

- > calculation of the application-specific costs
- > comparative economic Evaluation
- > calculation of payback periods



4. Energy management | load management

- > establishing an energy management system (for example, ISO 50001)



- > basics of internal energy audits
- > tasks of energy data management
- > structure of an energy data management system
- > acquisition and structuring of consumption data and costs
- > consumption and cost evaluations
- > comparison of indicators
- > process management Systems
- > reduce load peaks
- > software-based energy controlling

5. Energy and emissions trading

- > energy-related laws and regulations
- > energy purchasing, energy trading
- > emissions trading
- > contracting



6. Building energy requirements | energy efficient buildings

- > construction physical basics
- > construct | acquisition of the building envelope
- > building energy certification
- > energy-conscious building and renovation



7. Heating technology

- > system components
- > targetperformance analysis
- > optimization (furnace and boiler, distribution, control, power consumption)
- > geothermal energy



8. Process heat, steam, heat recovery

- > system analysis (components, functions, temperature levels, process chains)
- > process optimization
- > operating mode
- > heat recovery



9. Cogeneration of heat and power

- > basic concepts and variants of CHP
- > investments (turbine types, engine types, fuel cells)
- > peripheral systems
- > sizing of CHP plants (technical interpretation, profitability)
- > cogeneration unit (CHP)



10. Ventilation and air conditioning

- > basic physical laws
- > system components
- > analysis (flow, temperature difference, energy consumption)
- > optimization (user behavior, Operation)
- > Invest-measures (refrigerating machine, absorption , adsorption, spring water cooling, adiabatic cooling, distribution, utilization of waste heat)



11. Refrigeration technology

- > basic elements and functions of refrigeration Systems
- > analysis (COP calculation, losses, efficiency of the process)
- > optimization (user behavior, minimizing cooling requirements, process optimization, restructuring cooling network, scheme, waste heat utilization, absorption refrigerating machine)



12. Electrical engineering, electrical drives

- > basic knowledge electrical applications
- > transformer losses and motor losses



- > electronic speed regulation
- > selection of efficient electric motors
- > system optimization

13. Lighting

- > photometric basic parameters, lighting systems
- > dimensioning of lighting systems
- > operating time optimization
- > highly efficient lighting systems



14. Compressed air

- > compressors, distribution, compressed air consumers, plant control
- > analysis (power consumption, distribution losses, leakage, efficiency)
- > optimization (pressure level, control, leakage, maintenance, heat recovery, variable speed controlled compressor)



15. Solar technology

- > components and operating principle of solar thermal systems
- > applications of solar thermal plants (water, heating, hall heating, drying, solar cooling)
- > components and functional principle of photovoltaic (PV) systems
- > applications of PV systems (no external power supply, façade integration, shading elements)



16. Energy from biomass

- > wood-fired plants (plant components and function, system dimensioning)
- > biogas plants (plant components and function, system dimensioning)



17. Green IT

- > data centers and server systems
- > data center cooling
- > virtualization and consolidation
- > energy Efficiency at the office
- > change of user behavior



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Impressum | Datenschutz

GET SOCIAL



EUROPEAN ENERGYMANAGER TRAINING

The qualification of an
employee as an Energy
Manager (IHK) creates
operational know-how in
order to continuously uncover
energy-related weaknesses,
to use savings potential and
to optimize energy efficiency.
The project work achieved
saves companies an average
of about 30,000 euros per
year in energy costs.

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