

Trainee report - IAESTE Thailand training
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Period of training: 1st of August – 21st of October, 12 weeks

Kind of work: Studies on generator and motor maintenance in power plants.

Objectives: Trainee will understand the complete procedure of generator and motor maintenance.

Methods: Class room training (1 - 2 hours per day),
on the job training,
observation of inspection and overhaul sites.

General impression

The department for generator and motor maintenance at EGAT and the local committee of IAESTE Thailand took very well care of me.

I think that I was qualified for the work. The work concerned the course of study I'm in, but it would be OK if EGAT accepts students which are in their second year.

The work matched to the previous description and three month was the perfect period for the training.

A training schedule was prepared. I could propose changes in the schedule to highlight special fields of work. All the work was bound to instructions.

The internship was a great success. I could learn a lot of new skills. I have no profit for my course of studies, but a big profit for any future work. It was a great experience.

At work and in the free time conversations were in English. Sometimes small problems occurred in the communication. But there were enough Thai – English translators available. I could train the fluency of my English and learn a little bit of Thai.

The relationship to the colleagues at work was outstanding. We spend a lot of free time together and I could win a lot of new friends.

Work content

Class room training - basics

- Structure of hydroelectric power plants
- Structure of combined cycle power plants
- Structure of generators
- Basics on Insulation system
- Electrical testing
- Thermal power plant systems
- Generator protection system

Class room training - Maintenance

- Generator maintenance
- Motor maintenance
- Reliability centered maintenance
- Transformer testing (DGA and FURAN)
- Transformer life assessment
- Theory of partial discharge
- Partial discharge analysis and sensor installation

Class room training – failure case studies

- Generator failure case study - KN-C10, rotor terminal stud failure
- Generator failure case study - SB-C22, thermal sensitivity
- Generator failure case study - PMN-H, stator core defect
- Generator failure case study - BPK-T1, reverse power
- Motor failure case studies

Workshop overview - Visit to

- Nongchok stator rewinding workshop
- Bang Plee high voltage testing laboratory
- Bang Plee transformer workshop
- Nonthaburi instruments calibration center

Power plant overview – Visit to

- South Bangkok combined cycle power plant
- Mae Moh lignite power plant, major overhaul
- Ratchaburi thermal power plant, minor inspection
- Bhumibol dam hydroelectric power plant
- Chiang Mai small hydro electric power plant
- Vachiralonkorn dam hydroelectric power plant, minor inspection
- Lamtakong underground hydroelectric power plant

On the job training

- Electrical testing at Vachiralonkorn dam hydroelectric power plant minor inspection. Current and power transformer testing.
- High voltage motor inspection at Ratchaburi thermal power plant.
- Generator inspection at Ratchaburi thermal power plant.

Self training

- Internet research following the class room trainings
- Presentation of IAESTE
- Classification of hydroelectric power plants
- Benefits and problems of compound turbines
- Comparing electricity production in Thailand and Germany

Critics

- The training matched to what I expected.
- The trips up country were a lot of fun.
- The program was very well structured, but earlier information about changes in the schedule would have been nice.
- I suffered from too few information before the training started.
- More interactive tasks would improve the internship.

I enjoyed the internship very much. Everybody took very good care of me. The kindness of Thai people is outstanding.

I strongly recommend this internship for next year.