

Control and Protection of Generator and Turbines

Course Code: EPG09

COURSE OBJECTIVES

Upon completion of this course, participants will be able to:

- Understand the Governing system purpose and definition in power generation plant
- Understand the basic control & protection principles of Steam & Gas Turbine and Generators
- Apply the recommended operational, testing practices for power plants major equipments
- Understand the fundamentals of protection systems implemented in various power plants

MAIN CONTENTS

- Governing System Purpose & Definition
- Types of governors, Low & High Pressure systems
- Types of Electronic Controllers (PLC/DCS etc.)
- Main Equipment Controls & Interlocks (Typical)
- Gas Turbines
- Steam Turbines
- Generators
- Main Equipment Protections (Hydraulic & Electrical)
- Gas Turbines
- Steam Turbines
- Generators
- GT & ST Safety Systems
- ST Stop & Control Valves and Actuators (Typical)
- NEMA Class C & D Governors
- Purpose of Droop [% of regulation] and its influence on Electrical Network [Grid]
- Load / Speed hunting and Valve Chattering
- Governor Deadband / Sensitivity
- Effect of Hydrogen purity on Windage losses

METHODOLOGY

Lecture and case studies

TARGET AUDIENCE

Engineers & Technical staff who wish to understand controls & protections in power generation plants

COURSE DETAILS

Duration	:	14 hours
Mode of Delivery	:	Face-to-Face
Certification	:	SIPG Certificate of Completion
PDU by PE Board	:	Pending

COURSE FEES

Full Course Fee	:	S\$1,400 (before GST)
For Singapore Citizens/PR/LTVP+*	:	S\$420 (before GST)
For Singapore Citizens (40 years old and above)	:	S\$140 (before GST)

ADDITIONAL REMARKS

- Trainee must attain at least 75% attendance rate and pass the assessment to receive Certificate of Completion and funding grant (if applicable).
- Subsidy of up to 70% is applicable for Singapore Citizens, Permanent Residents or Long-Term Visitor Pass Plus (LTVP+) Holders, subject to funding agency's approval.
- Enhanced subsidy of up to 90% is applicable for Singapore Citizens aged 40 years and above, subject to funding agency's approval. Note that GST payable will be computed from fee after 70% funding.
- Professional Development Unit (PDU) is applicable for Professional Engineers registered under the Professional Engineers (PE) Board only.
- All published fees are subject to prevailing GST.

CONTACT US

For more information, please contact SIPG at +65 6916 7930 or email training-institute@spgroup.com.sg.

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