



MEGA JATI ACADEMY SDN BHD

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A SHORT COURSE ON PROTECTION AGAINST LIGHTNING ACCORDING TO THE ENFORCEMENT OF MALAYSIAN STANDARD MS IEC 62305 BY SURUHANJAYA TENAGA

TRAINING ID: MJA/ST-LPS/2020/001

By

MEGA JATI ACADEMY SDN BHD

No 14-1, JALAN MARIKH CB U5/CB

SECTION U5, 40150 SHAH ALAM

SELANGOR, MALAYSIA

2020

A SHORT COURSE ON PROTECTION AGAINST LIGHTNING ACCORDING TO THE ENFORCEMENT OF MALAYSIAN STANDARD MS IEC 62305 BY SURUHANJAYA TENAGA

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1.0 INTRODUCTION

*In accordance with the provisions of **Section 47 of Electricity Act 1990 [Act 447], Suruhanjaya Tenaga (ST)** stipulated that the design, installation, supervision, testing, operation and maintenance of lightning protection systems in buildings should be made in accordance with **Malaysian Standards MS IEC 62305 – Protection Against Lightning**.*

*These instructions may be called the enforcement instructions for applying **Malaysian Standards MS IEC 62305 – Protection Against Lightning** for Lightning Protection System in buildings. This instruction shall be enforced on the date it is registered. This directive shall apply to all installations from the date that this order becomes effective.*

*Accordingly, **Suruhanjaya Tenaga (ST)** hereby issues an instruction with the registration number **Arahan/ST/No.4/2019** in appendix 2 on the enforcement of applications **Malaysian Standards MS IEC 62305 – Protection Against Lightning** for lightning protection system in buildings to competent persons, electrical service contractors, electrical contractors, consultants, owners or building management for compliance with such instructions.*

*Be advised that a person found to have failed to comply with this directive shall be guilty of an offense and shall, on conviction, be liable to a fine not exceeding two hundred thousand ringgit or to imprisonment for a term not exceeding two years or to both in accordance with the provisions of **Section 50E, Act 447**.*

(SOURCE: Arahan/ST/No.4/2019)

Lightning issues become important as Malaysia location in equatorial is recorded the highest density and occurrence of lightning due to hot and humid tropical environment subsequently introduces high formation of cloud which finally led to thundercloud after evaporation of humidity from the air, land and sea surround it. The number of thunderstorm day which more than 300 days per year indicates the serious number of occurrence hence exposed a physical hazard for both human and equipment if not been handled and protect sufficiently.

Understanding the actual issues especially involving technical knowhow in Lightning Protection System is really important so that the action precisely can be taken to harness the real issues involving electrical safety not only conjecture with virtual statement without any evidence that sometime may confused and mislead the public from the actual facts, hence, contributed to the losses and damage to the human life and property.

This course is designed to give a better knowledge to competent persons, electrical service contractors, electrical contractors, consultants, owners or building management that need a basic understanding on electrical grounding, LPS and SPD. This course is offered as a two-day condensed course, focused on the basics of subject matter, problems and solutions in accordance to **MS IEC 62305 – Protection Against Lightning**.

Mega Jati Academy (MJA) is offering the consultation services for competent persons, electrical service contractors, electrical contractors, consultants, owners or building management Nationwide in helping them to explain the implementation process and guidance for an essential action to be taken and preparation of relevant action and documentations pertaining the practice to comply with **MS IEC 62305 – Protection Against Lightning** for lightning protection system in buildings.

Supported by highly experienced and dedicated Industrial Practitioners plus Professors as workshops leaders, MJA will assist the competent persons, electrical service contractors, electrical contractors, consultants, owners or building management to understand and implement the **MS IEC 62305 – Protection Against Lightning** for lightning protection system in buildings in their organization with minimal investment in line with energy commission aspirations.

2.0 COURSE OBJECTIVES

The objectives of the course are:

1. To **EXPLAIN** and **APPRAISE** the competent persons, electrical service contractors, electrical contractors, consultants, owners or building management on the requirements and process of implementation and application lightning protection system that according to MS IEC 62305 – Protection Against Lightning.
2. To **GUIDE** and **FACILITATE** the competent persons, electrical service contractors, electrical contractors, consultants, owners or building management in taking essential action and preparing related documentations that according MS IEC 62305 – Protection Against Lightning.
3. To **ADVISE** and **CONSULT** the competent persons, electrical service contractors, electrical contractors, consultants, owners or building management on overall implementations of MS IEC 62305 – Protection Against Lightning in their building facilities.

3.0 LANGUAGE & LOCATION:

The course material will be in English and Malay. Course can be held at any electrical contractors, consultants, owners or building management facilities nationwide.

4.0 COURSE FEE:

NO	TYPE OF PAYMENT	ACCOUNT NAME	BANK	ACCOUNT NUMBER
1	Cash, Cheque, Transfer	Mega Jati ACADEMY Sdn Bhd	Bank Islam Malaysia Berhad, Bandar Sri Damansara	1427-401000-7241
2	LO, HRDF	Mega Jati Consult Sdn Bhd	Maybank Banking Berhad, Taman Tun Dr Ismail, Kuala Lumpur	5142-7132-6182
3	e-PEROLEHAN	Mega Jati Consult Sdn Bhd	Nombor e-Perolehan Pembekal eP-140010377	

For help and further information please contact

- 1) Account: Miss Ria : 012 349 8656
- 2) Training: Miss Zahafarina : 017 419 3031 / Khairi: 011 165 66286

5.0 COURSE OUTLINE

COURSE NAME	A SHORT COURSE ON PROTECTION AGAINST LIGHTNING ACCORDING TO THE ENFORCEMENT OF MALAYSIAN STANDARD MS IEC 62305 BY SURUHANJAYA TENAGA		
DURATION REQUIRED	2 DAYS	LEARNING TIME	16 HOURS
METHOD OF LEARNING	LECTURE, AUDIO VISUAL, WORKSHOP, FACILITATOR COACHING, QUESTION AND ANSWER.		
CPD AWARDED	CIDB 20 CPD FOR EACH PARTICIPANT / HRDF CLAIMABLE		

TIME	8.30 AM – 10.30 AM	10.30 AM 11.00 AM	11.00 AM – 12.30 PM	12.30 PM 2.30 PM	2.30 PM 5.30 PM
DAY					
DAY 1: SECTION 1: MS IEC 62305 – PROTECTION AGAINST LIGHTNING (GENERAL PRINCIPLES & RISK MANAGEMENT)					
FIRST DAY	INTRODUCTION TO MS IEC 62305 - PROTECTION AGAINST LIGHTNING, MS IEC 62305-1:2007 - GENERAL PRINCIPLES, TRAGEDIES DUE TO LIGHTNING		MS IEC 62305-2:2007 – RISK MANAGEMENT, LIGHTNING IN MALAYSIA, LIGHTNING RISKS, LIGHTNING FACTS		THEORY OF LIGHTNING CATEGORIES OF LIGHTNING EFFECT, WHAT IS TRANSIENT SURGES?, DEFINITION OF SURGES, SOURCE OF SURGES
DAY 2: SECTION 2: MS IEC 62305 – PROTECTION AGAINST LIGHTNING (PHYSICAL DAMAGE TO STRUCTURES AND LIFE HAZARD & ELECTRICAL AND ELECTRONIC SYSTEM WITHIN STRUCTURES)					
SECOND DAY	MS IEC 62305-3:2007 – PHYSICAL DAMAGE TO STRUCTURES AND LIFE HAZARD, THE EFFECT OF LIGHTNING SURGE ON THE POWER SYSTEM QUALITY, DAMAGE TO MAIN ELECTRICAL PANEL, COMMUNICATION MODULE, SENSITIVE COMPONENTS AND IMPACT ON LIGHTNING SURGE TO SYSTEM EQUIPMENTS		MS IEC 62305-4:2007 – ELECTRICAL AND ELECTRONIC SYSTEMS WITHIN STRUCTURES, LIGHTNING PROTECTION SYSTEM, LIGHTNING PROTECTION ASSESSMENT, LIGHTNING PROTECTION DESGN		SURGE PROTECTION SYSTEM (SPD), NOTES AND RATING ON SPD, SINGLE VARISTOR AND MULTIPLE VARISTOR, LET THROUGH VOLTAGE, 7 MODULE VS 3+1 MODULE, MONOBLOCK TYPE VS MODULAR TYPE, MS IEC 62305 SELECTION AND APPLICATION

**Subject to final changes*

6.0 COURSE SPEAKER



Ir. Abd. Mokhti B. Salleh has a Master Degree in Lightning Protection System. He is currently a Chairman of Mega Jati Consult Sdn Bhd, the M&E Consultant. He has more than 30 years' experience in the field of Lightning and Surge Protection system. Ir Abd. Mokhti was appointed by JKR Electric Department, Malaysia as a Specialist Lightning and Surge Protection System for a period between May 2008 to April 2009. One of the scopes of works is to train the JKR Electric's engineers on the design of the Lightning and Surge Protection System. He has given many talks and seminar on Lightning and Surge Protection System. He was also appointed as Visiting Professor at Universiti Malaysia Perlis in 2015.



Mohd Hilmi Bin Abd Mokhti (Grad BEM, Grad MBOT), holds a Bachelor of Engineering Technology (Hons) in Electrical from UNIKL British Malaysian Institute (BMI). His specializations are in lightning and surge protection and have provided training for both government agencies and private sectors. He is a Registered Graduate Engineers and Registered Technologist with the Board of Engineers Malaysia (BEM), Malaysia Board of Technologist (MBOT) and a Certified SEDA GCPV Competent Person. His current projects involve Gemas-JB Double Track with YTL and Lumut Electrical Infra works with SAPURA. He is also a shareholder and Director of Mega Jati Consult / Mega Jati Academy Sdn Bhd.

**Subject to availability of speaker and final changes*

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Mega Jati ACADEMY

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