

# 2 HALF DAYS WEBINAR ON RISK ANALYSIS AND LIGHTNING PROTECTION SYSTEM (LPS) BASED ON MS IEC 62305

BEM APPROVED CPD/PDP: 7.5 REF. NO.: IEM21/HQ/070/T(W)

**SPEAKER :**  
**Mr. RITESH LUTCHMAN**

**1 APRIL 2021**  
**&**  
**2 APRIL 2021**

**9AM - 1PM**

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**(Subject to 6% SST)**

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# SYNOPSIS

In this webinar, we will discuss the application of Risk Analysis and how to apply risk analysis outcomes to the internal and external Lightning Protection System (LPS) design based on MS IEC 62305 standard.

## **1) Are you still designing the Lightning Protection System (LPS) based on the BS 6651:1999 British Standard?**

Did you know that Malaysia has adopted the MS IEC 62305 Part 1 to 4 Protection Against Lightning since 2006? Suruhanjaya Tenaga has also enforced that LPS for buildings shall comply with MS IEC 62305 - Protection Against Lightning. Britain has replaced BS 6651 with BS EN 62305 from 1st September 2008 onwards. What are the main differences between BS 6651 and MS IEC 62305?

## **2) Should Risk Analysis be conducted for every project? The answer is YES!**

Explanation of Risk Analysis based on MS IEC 62305 Part 2, simplify risk analysis with risk analysis software demonstration and identify level of external lightning protection based on Risk Analysis LPS I, II, III or IV.

## **3) External Lightning Protection MS IEC 62305 Part 3:**

Three components of External Lightning Protection: Air Termination, Down Conductors and Earthing.  
Rolling Sphere, Protection Angle and Mesh size according to LPS I, II, III or IV.  
Placement of Air Termination Rod based on Rolling Sphere method.  
Definition and use of Separation Distance 'S'.  
Spacing between down conductors according to LPS I, II, III or IV.  
Use of Reinforcement bars as down conductors.  
Welded Joints v/s Clamped Joints v/s Bound Joints v/s Latched Joints.  
Types of Earthing; Type A or Type B.  
Equipotential Earthing.

## **4) Save up to 33% costs of material and labour by knowing the materials and installation methods while still complying to MS IEC 62305 standard.**

LPS materials and conditions of use: Table 5 MS IEC 62305 Part 3. Material, configuration and minimum cross-sectional area of air-termination conductors, air-termination rods, earth lead-in rods and down-conductors: Table 7 MS IEC 62305 Part 3.

## **5) Internal Lightning Protection MS IEC 62305 Part 4**

Is an SPD rated 200kA able to withstand a 200kA surge - 10/350 $\mu$ s or 8/20 $\mu$ s?  
What International Standard is applied - IEEE (UL Std), BS Std, AS Std or the IEC Std?  
What are the differences? Malaysia has adopted the IEC Std for Risk Analysis and SPD application.  
Correct application for Lightning Current Protection (10/350 $\mu$ s) and Surge (Transient) Current (8/20 $\mu$ s).  
Differences in energy level for 10/350 $\mu$ s or 8/20 $\mu$ s?  
Terminology: per mode, per phase, per conductor, total surge, I<sub>max</sub>, I<sub>imp</sub>, I<sub>n</sub>, etc.  
Differences and Comparison in Class I (Type 1), Class II (Type 2) and Class III (Type 3) for ALL types of SPD  
Spark gap technology v/s MOVs and Coordination.  
IEC std testing requires SPD to withstand the Prospective Short Circuit Current at point of installation - the "short-circuit withstand" of SPD must be rated e.g.: 50kA rms or 25kA rms with the coordinated fuses.

## SPEAKER'S BIODATA

**Mr Ritesh Lutchman is currently the Senior Sales and Marketing Manager at Wisepro Sdn Bhd. He has been working in the industry for the past 15 years and has gathered great experience in the design, installation, troubleshooting and site works for the industries mentioned above. He has also received extensive training on the Lightning Protection at Dehn headquarters in Germany, power factor capacitors, reactors and harmonics at Shizuki headquarters in Japan and ATS applications and troubleshooting at Vitzrotech headquarters in Korea. He graduated from the University of Cape Town with a degree in Electrical Engineering in 2004 and Master's Degree in Electrical Engineering in 2006.**

# TENTATIVE AGENDA

## 1<sup>st</sup> April 2021

08:30 – 09:00	Registration
09:00 – 10.15	Are you still designing the Lightning Protection System (LPS) based on the BS 6651:1999 British Standard?
10.15 – 11.15	Should Risk Analysis be conducted for every project?
11.15 – 11.30	Break
11.30 – 12.30	External Lighting Protection MS IEC 62305 Part 3
12.30 – 13.00	Question & Answer

## 2<sup>nd</sup> April 2021

09:00 – 10.45	Save up to 33% costs of material and labour by knowing the materials and installation methods while still complying to MS IEC 62305 standard.
10.45 – 11.00	Break
11.00 – 12.30	Internal Lighting Protection MS IEC 62305 Part 4
12.30 – 13.00	Question & Answer