once again

2 days training on Lightning Protection System
IS/IEC 62305, IEC 61643, NBC-2016

With the best international resource who make standards

2 Days Training Session on Lightning Protection. Jointly Organised by -

Mr.Ganesan, Mr.Varadharajan, Dr. Chandima Gomes , Dr. Murli das, Mr. Gopakumar during 2 days seminar at Kochi in 2006.

Mr.Ganesan and Mr.Gopakumar with Railway S&T officials at IRISET, Secunderabad during 2days EMI/EMC program in 2015.

we are preferred since 2002 as the specialist in EMI/EMC and lightning protection system.

we trained more than 4000 engineers during these years. having customers all over India, training and failure analysis of electronic system is in our breath. we are again with the best and the most experienced international resource who make IEC standards on Lightning Protection System and SPD's

IS/IEC 62305 as well as National Building Code of India (NBC-2016) set new levels in the subject. this high class knowledge sharing session will make you an expert to design,select and use the best protection solutions.

Dr.Shriram Sharma,Dr.Chandima Gomes
Mr.Gopakumar & participants during 2 days Lightning Protection in Nepal,June 2016 along with former Prime Minister Hon.Shri.Jhala Nath kam Kamal

Participants at 5 days EMI/EMC program at Malayasia in 2012.

lightning protection & equipotential bonding system provide safety for buildings and its contents. Indian standard IS/IEC 62305 as well as National Building Code of India (NBC-2016) provide clear technical information on internal and external lightning protection.

lack of awareness created non standard installation practices in India which provide more problem rather than solution.

Alain ROUSSEAU is the chairman of IEC technical committee 37 which is responsible for the standardisation of SPD's.

Chandima Gomes is a member in IEC technical committee 81 which is responsible for standardisation on lightning protection IEC 62305.

this training session is to introduce the best possible protection system for every participant not only from lightning, but from all EM interference as well as problems related to earthing

lightning is a natural hazard that causes serious economic losses, personal injuries and death in many parts of the world. lightning ignites fires that may bring an entire building or a house down to ashes. at a lower degree of damages, lightning current may destroy electrical, electronic and communication equipment beyond repair. however one of the most significant a loss lightning may cause as far as industries are concerned is the downtime. many of those damages and losses could be minimized by educating the engineering and general public in lightning protection and safety requirements.

traditional methods are used for protection of ground based facilities and operating systems against the effect of lightning strikes, including use of lightning rods, grounding systems etc have been well understood for many years. however, these methods are usually not effective against lightning's in-direct effects on electronic systems. lack of information regarding the lightning related characteristics is one barrier that hinders the development of protection systems. the poor knowledge among the engineering community on lightning protection and the lack of awareness among the general public in lightning safety.

this 2-day training session is designed to cover important design and installation techniques which will be highly beneficial to engineers working in industrial, aviation, military, insurance, power, communication, electronic, it equipment and other institution or individuals
interested in the above subject.

Alain ROUSSEAU

Chairman – IEC TC 37A in charge of Low-Voltage surge arresters
Convener – IEC TC SC37A Working Group 3 in charge of the application guide SPD's
Convener - IEC TC81 Working Group 17 in charge of the Thunderstorm Warning Systems.

Alain ROUSSEAU is having 33 years of experience in lightning/surge protection and in standards development. He is the chairman of SAFETIM, France a recognized expert in lightning and surge protection especially for complex sites such as radars stations, chemical and petroleum plants, explosive areas & nuclear plants.

He is a member of various scientific committees: CIGRE Distinguished Member (HV electrical network), SEE Senior Member (French Group of Electrical Engineers), Chairman of SEE Lightning Group, French Lightning Protection Association Scientific Committee, Author of many international scientific papers : SEE, IEEE, ICLP,CIGRE, CIRED, ISH, TI, EAT, IEE, ERA …, Author of many patents on lightning and surge protection.

Chairman of French Committee for Surge Protective Devices and Lightning Protection System
Chairman of CENELEC and IEC Surge Protective Device Committee
Convener IEC Working Group on SDP application guide and Thunderstorm Warning System
Member of standard committees French (AFNOR), European (CENELEC), International (IEC), American (IEEE), British (BSI) and Chinese (CMA) : – SPD, SPD Components, Traction Surge Arresters, Building Electrical Installation, Lightning Protection, Wind Turbine, Photovoltaic

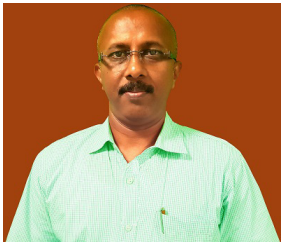
Prof. Dr. Chandima Gomes
BSc, PhD, CEng (UK), CPhys (UK), CPhys (SL), MIET (UK), MInstP (UK), MIP (SL)

Member TC 81 (Standardisation of LPS - IEC 62305)

Chandima Gomes is a professor of electrical engineering and researcher in high voltage engineering and lightning protection at University Putra Malaysia. He is also an expert in power and energy, electromagnetic interference and compatibility and occupational safety management.

He was the founder of the Centre for Electromagnetics and Lightning Protection Research (CELP), Malaysia and the first Head of the Institute. He has held full-time/adjunct/visiting professorship and lectureship in physics, engineering and meteorology at universities based in Malaysia, Sri Lanka, USA, Australia, Kazakhstan, Pakistan, Zambia and Japan. He is a senior adviser to the National Lightning Safety Institution (NLSI), USA and was the Chief Adviser to African Centers for Lightning and Electromagnetics (ACLENet) based in Uganda. Being an engineering consultant for several companies in Asia and Africa.

He has 20+ years of international experience in designing lightning protection systems and providing solutions for electromagnetic issues. He is well known at international frontiers as a trainer of trainers in several engineering subjects including, lightning, electrical safety and electromagnetism. He has conducted over 120 training programs in 12 countries so far. Chandima has published over 250 research papers and several books on his expertise. He obtained a First Class Degree in Physics from the University of Colombo in 1993. He has done his PhD (1999) and postdoctoral research on lightning protection and high voltage engineering at Uppsala University, Sweden.



S. Gopa Kumar is the founder of CAPE Electric, LPCI, OBO Bettermann India Pvt Ltd.

Member NBC-2016 (electrical committee), Bureau of Indian Standards

having more than 20 years experience in Lightning Protection and low voltage electrical safety. CAPE electric is a pioneer in India who introduced number of new products especially SPD's in the year 1998 and now LV electrical installation verification as per IEC standards. He has done 100's of site studies about failure of electronics in industrial system. One of his passion is to train engineers in electrical safety and protection.

K.V. Varadharajan is a Graduate in Electronics and Communication Engineering.

he has more than 25 years of experience in the field of Lightning and Surge protection and in Instrumentation Industry. Worked in ABB, Emerson, Foxboro, MTL etc. Presently he is the Director in LPCI. His articles are published in many magazines. He has offered more than 1000 presentations on Lightning and Surge protection to various industries in India and abroad.

Date: 2nd and 3rd august – Mumbai - Orchid Hotel, Near Domestic Airport
4th and 5th august – Chennai - Hilton, Ekkaduthangal
8th and 9th august – Kolkata - Swissotel,City Center New Town
10th and 11th august – Delhi - The Park,Parliment Street,C.P

Timings: 9.30 am to 5.30 pm
2 tea breaks for 15 mins each & 30 mins lunch break

Course fees – **Rs.20,000** + **Tax (GST)**
(including course materials)

Selection of participants will be strictly based on first come first serve basis.
The participants will have to make their own arrangements of stay and travel.

Programme Coordinator – Mr.Rohit
Mobile :- +91 7397798502 / +91 44-71018125
Contact by mail :- india@lpci.in
or visit www.lpci.in

Topics – Day 1

Concepts of Lightning: Lightning initiation, attachment and return stroke, characteristic and statistics of lightning generated and electric fields, multiplicity, types of lightning, induced voltages, spatial and temporal distribution of lightning density, lightning measurements, triggered lightning, laboratory simulations, current models and field calculation.

National Standards, Risk analysis and Non standard practices in India: Introduction to standards & recommendations, calculation of lightning risk factors and recommendation of the level of protection. Non standard installation practices in India.

External & Structural protection: Basic concepts, rolling sphere protective angle mesh methods, Designing and positioning of air-termination and down conductor systems, materials and dimensions. Designing of earth network, Equipotential bonding, installation technologies, isolated protection systems, special issues of earthing, site inspection and maintenance

Designing of LPS for different type of structures.
Use of reinforcement steel and foundation earth for lightning protection

Topics - Day 2

Protection of Low Voltage Electrical Systems: Need for protection, Lightning Protection Zone concept, coupling mechanisms, Lightning and switching impulses, protection scenario, wiring systems for buildings, mode of protection, peak current handing capacity, let-through voltage, MCOV, follow-current etc., classes of surge protectors, type of surge protectors, SPD selection criteria, installation concerns, test impulses and testing procedures. Selection of SPD's for LV power, DATA, signal and coaxial application

Earthing: IS/IEC and IEEE standards. LV networks, system earthing, equipment earthing.

One system - One earthing.Earthing of electronic system

Wrong – Separate Connection to a low resistance earth electrode in soil.

Right – Separate and Low resistance connection to an earthing system.

Selected Cases: Protection of Oil refineries, Explosive storage, Windmills, tower sites, watercrafts, aircrafts, thermal power plants etc., (2 topics will be selected depending on the interests of the participants on prior intimation)

Human safety and safety guidelines: Statistics of lightning accidents, direct strikes and side flashes, step potential, touch potential, international guidelines, health hazards, recommendations for outdoor workers, safety devices.

Jointly organised by

CAPE
ELECTRIC

LP consultants International Pvt Ltd
O-37, door no 8, Bharati dasan street,
Tiru nagar, Jafferkhanpet,
Chennai – 600083, India
www.lpci.in
india@lpci.in

LPCI