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# ieema journal

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7

## From the President's Desk

10

## Samvaad

16

## Cover Story

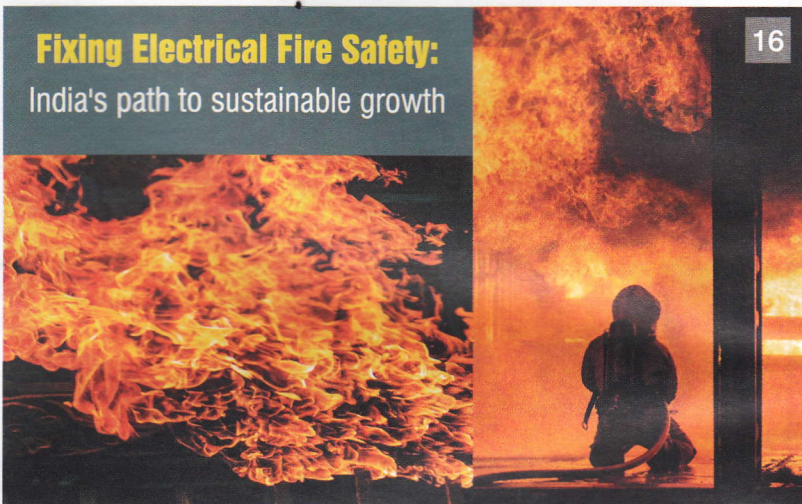
### Fixing Electrical Fire Safety: India's path to sustainable growth

The Indian electrical industry is gearing up for improving the standards adopted in the country, with the Bureau of Indian Standards (BIS) releasing the revised the National Electrical Code (NEC) of India, in January 2023. Termed as the "most contemporary version of the NEC in line with the latest international practices," the code is expected to phenomenally upgrade the current practices adopted in various electrical installations, once strictly implemented.

30

## Guest Article

### Saving Lives and Property through Passive Electrical Fire Containment (Passive Fire Protection)

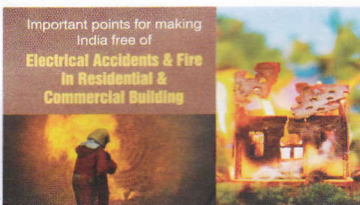


16

35

## Expert Speak

### Important points for making India free of Electrical Accidents & Fire in Residential & Commercial Building



The news of electrical fires in residential or commercial buildings gives pain and forces everyone to ponder over the reason and solution thereof. The latest example is over 2,000 employees of various companies operating from a multi-storied building of an IT business centre in Pune's Viman Nagar were evacuated after a fire which broke out on the ground floor spread to the floors above through a duct (refer figure 1).

50

## Analysis

### Fire due to 'short-circuit'? How to protect cables against short-circuit currents in line with NEC 2023 (SP 30) and IS 732



Fire-safety in buildings is a much-talked about subject, especially given the abundance of electrical-related fires that occur on a daily basis. Several of these incidents are attributed to 'short circuits' as reported by the press. Unfortunately, this creates an impression amongst the general public that fires due to short-circuits are unavoidable, and these are a risk of using electricity in our daily lives.

For suggestions and feedback please write to us on [shalini.singh@ieema.org](mailto:shalini.singh@ieema.org)



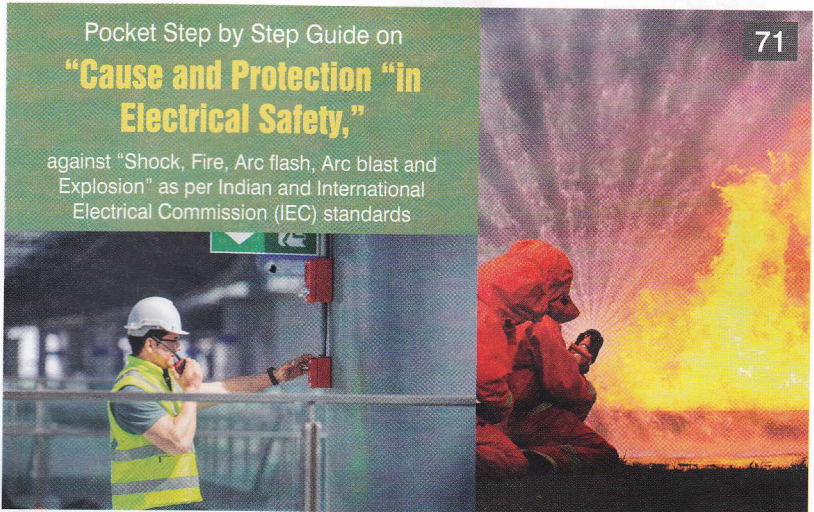
54

### InDepth

#### Fire Hazards and Electricity

Fire in buildings due to usage of electricity is common from the day of invention of electricity. The transmission, distribution, storage, and utilization of electrical energy can have the potential to contribute to fire hazard. In India, statistics shows large number of fires in buildings are caused due to electrical short circuiting in low voltage (230 - 440 V) system.

Pocket Step by Step Guide on  
**“Cause and Protection “in Electrical Safety,”**  
against “Shock, Fire, Arc flash, Arc blast and Explosion” as per Indian and International Electrical Commission (IEC) standards

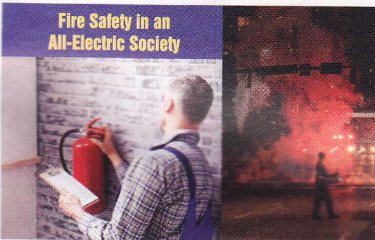


71

60

### InFocus

#### Fire Safety in an All-Electric Society



As our global economy rapidly advances, products are becoming energized, autonomous, digital, and interconnected. It is noticeably clear that electricity has improved our quality of life – from the phones we use and the cars we drive, to the way we power our buildings.

68

### Insight

#### India’s Sustainable Urbanisation requires a Solution to the Burning Problem of Electrical Safety

As India envisions to become a developed nation by 2047, the nation’s infrastructure will play a pivotal role in meeting this goal. It is expected that India’s urban population size will almost double between 2018 and 2050, from 461 million to 877 million. In order to meet its developmental objectives, the country is witnessing rapid urbanisation along with an increased penetration of electrical appliances in Indian households.

71

### Guest Article

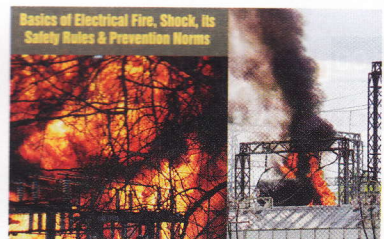
#### Pocket Step by Step Guide on “Cause and Protection “in Electrical Safety,” against “Shock, Fire, Arc flash, Arc blast and Explosion” as per Indian and International Electrical Commission (IEC) standards

Every day we read newspapers 1 or 2 electrical shocks and Fire in Electrical Installation. This will cause loss of life, billions of rupees loss, damage to property, and loss of power.

80

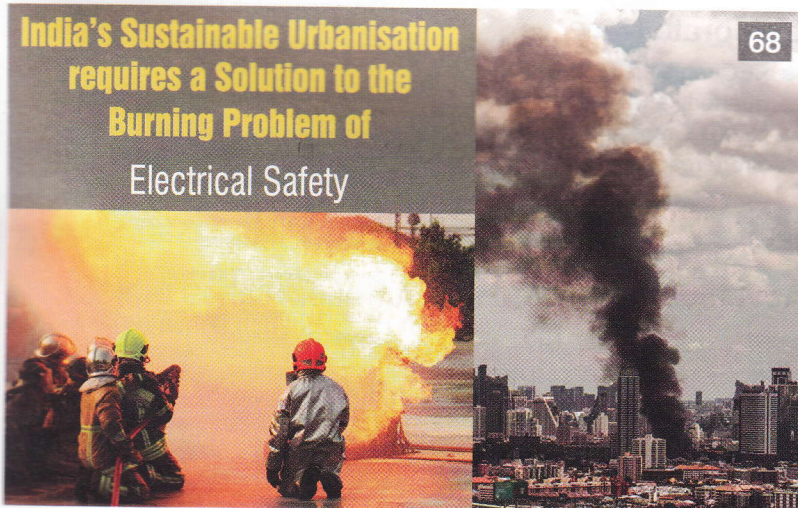
### Prevention

#### Basics of Electrical Fire, Shock, its Safety Rules & Prevention Norms



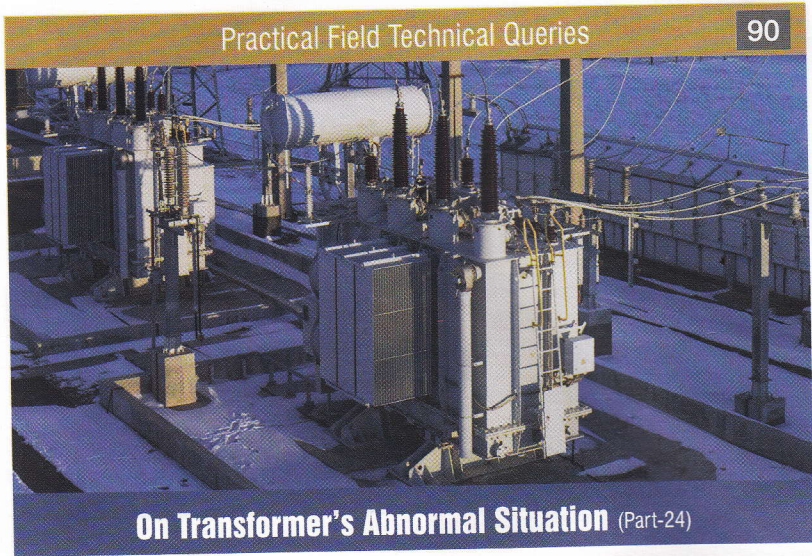
Fire start from excessive or un-controlled heat, which may cause damaged to our mankind. But at the same time controlled heat & fire is prime requirement now for mankind to maintains there comfort including creation of energy.

**India’s Sustainable Urbanisation requires a Solution to the Burning Problem of Electrical Safety**



68





90

**Events and Eventualities**

**Practical field technical queries on transformer's abnormal situation (Part-24)**

Last few months, the case studies on TRANSFORMER's Abnormal situation was getting published under the section of EVENT and EVENTUALITIES series. Readers especially from field units on accepting this series, have started asking queries on various subjects relating to the studies.

96

**ERDA**

99

**Product Showcase**

100

**Power Scenario**

Global Scenario  
Indian Scenario

102

**IEEMA Database**

Basic Prices & Indices  
Production Statistics

104

**International News**

- Statkraft announces major expansion plans into German renewables market
- Aggreko funds 500MW community solar projects on US farmland

106

**National News**

- PGCIL to Hive Off Consultancy Business into New Subsidiary
- Madhya Pradesh Gets Its 1000th Transformer, Installed at Harda Substation

108

**Corporate News**

- REC registers highest ever quarterly and yearly profit of ₹3,001 Crore and ₹11,055 Crore respectively

111

**Advt Index**

112

**Sparks Sans Shocks**

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