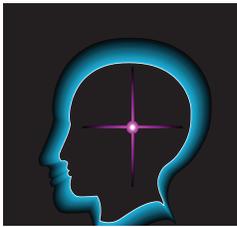


IoSM Feature Article: Florescent Lights



THOUGHTS FOR THE MONTH



○| “If we all did the things we are capable of doing, we would literally astound ourselves”- Thomas Edison

○| “As a leader you should always start with where people are, before you try to take them to where you want them to be.” - Jim Rohn

○| “Earn your success based on service to others, not at the expense of others.” - H. Jackson Brown Jr

Hidden dangers of florescent lights

Recently, the offices of S. Reddy and Associates experienced a fire in one of their dining areas which was caused by an electrical problem in one of the florescent light fittings servicing this area. On investigation by management, it was concluded that the fire started due to a defect in a capacitor which forms part of the lights circuitry. This fault lead to the capacitor catching alight within the head unit of the four tube fitting, which then ignited the diffuser cover which melted and finally ignited a section of the dining room carpet and the plastic covers of three chairs.

A four tube light fitting used at the offices of SRA :

The type of capacitor responsible for the ignition of the fire :



The physical outcome of the incident:



Key findings made:

- ❑ The light servicing this room was left on in error that night.
- ❑ The light was fully functional prior to the incident and showed no signs of electrical fatigue.
- ❑ A routine electrical inspection by the property manager’s electrician was conducted in the last quarter of 2009 and no deviations were noted.
- ❑ It is difficult to predict when a capacitor may become defective and cause such fires - almost as difficult as predicting when one would have a puncture on the road!

As a preventative measure for future fires like this, management of SRA has decided to upgrade all lights to the new head units which are electronic. These units have done away with the conventional capacitors, starters and induction coils commonly found in the circuitry of florescent lights and which are also responsible for such fires. Further to this, all lights will be relayed through failsafe electrical contactors, so if staff do forget to switch off any lights in future, this device will automatically shut down the electrical supply to them when the office is being closed for the day.

Other reasons for such fires include:

- Defects in ballast coils.
- Wires that become brittle and short out.
- A loss of capacitance, capacitors running hot and deformation of the capacitor case.
- Electrical surges which may cause component failure.

Q - How many of us leave unattended florescent lights on at night?