IS 11360:1985 - Specification for Smoke Detectors for Automatic Electrical Fire Alarm Systems

The IS 11360:1985 standard specifies requirements for **smoke detectors** designed for use in automatic fire alarm systems, ensuring early detection and minimizing life risks and property loss. This standard applies to both **ionization and optical (photoelectric) smoke detectors** for indoor installations.

The standard highlights the importance of detecting fires at the incipient stage to allow adequate evacuation time and early fire suppression. Smoke detectors, which identify **invisible aerosols and smoke from early-stage fires,** activate audio and visual alarms to alert occupants. Detectors based on gas emissions, however, are outside this standard's scope.

Key constructional and performance requirements include robust visual indicators for normal and alarm conditions **visible up to 6 meters**, secure alignment mechanisms to prevent mis installation, and stable terminals for safe conductor connections. **Performance criteria** cover reliability under environmental stressors such as **high humidity, temperature fluctuations, dust, and light exposure**. Each detector undergoes type testing, including sensitivity, reproducibility, endurance, and stability tests to maintain functionality across 10,000 production units.

The standard mandates clear labeling, showing the detector type, power specifications, manufacturing date, service intervals, and, for ionization detectors, details on radioactive components. **Installation guidelines** include spacing and positioning to optimize smoke entry for timely response.

IS 11360 ensures that smoke detectors are manufactured to rigorous safety standards, making them **reliable components in fire safety systems** and providing early alerts to safeguard lives and property.