

Surges and Transients

Problems

▪ **Surges and transients have the following adverse effects:**

- Increase maintenance and downtime.
- Increase Hysteresis losses.
- Increase Eddy current losses.
- Increase Skin effect losses.
- Reduce lifetime of equipment.
- Cause computers to stop execution of programs.
- Create false data in computers.
- Erase data in computer memory.
- Result in hardware damage.
- Cause damage to insulation in transformers and motors.
- Cause nuisance tripping of adjustable-speed drives.
- Wasted energy (KW, KVA, KWH).

SURGES & TRANSIENTS Time Amplitude Surge Transient

