# Instrument Transformer – Part 4
# Current Transformer - Saturation

NCEES® PE Power Reference Handbook doesn't contain specific details on this topic

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- CTs can link limited amount of flux between primary and secondary windings in the core.
- Change in primary flux creates a ratio current flow in secondary circuit.
- This relationship remains linear if flux density in CT core remains below maximum limit.
- CT is said to be saturated when primary current is so high that its core cannot handle any more flux,.
- Linear relationship between primary current change and flux change becomes invalid in saturation.
- Since there is no flux change there is no secondary current flow.
- In saturation, entire ratio  current is used as magnetizing current and none flows into the CT load.
- Max. secondary current should be < 20 times rated current (100A for 5A rated CT) for ANSI class C CT.
- Saturation depends on CT dimension, core material and burden.

**How can you avoid saturation?**

- Use CT with higher ratio (oversizing) and reduce burden.

# Current Transformer – Knee-point

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