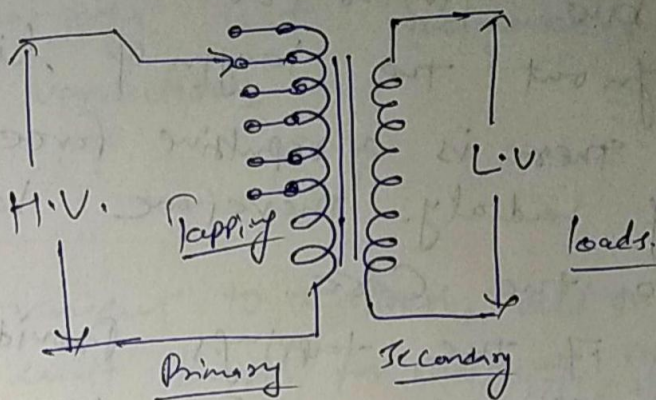


# Tap changing.

→ (Always provide on H.V. Side)  
→ (Provide in middle of way)



① Generally tapplings can be provided at Primary or Secondary, H.V. or L.V. But due to Technical advantages & reasons, tapplings are provided on H.V. & on Primary winding.

② H.V. way is basically low current wdg therefore Tap changing process low current.

H.V. has large no. of turns & wide variation is possible. for Insulation Consideration It is placed on L.V.

therefore tapplings can be easily provided. under light load Cond<sup>n</sup> drop is less. & the Primary V<sub>g</sub> can be reduce through tapplings which reduce the flux density & reduce iron loss therefore efficiency of the X<sub>mer</sub> under light load Cond<sup>n</sup> can be maintained.

Tapplings can be provided phase end & Neutral end

or at the middle

In order to balance the electro mag forces b/w HV or LV the mmf is balanced throughout the length of limb.

there is a repulsive force b/w HV & LV. acting radially. therefore LV is compressed on to the core.

If the tapings provided on the load, not offering a symmetric mmf. the force become axial. ~~with~~ which distorts the wdg under short ct.

therefore tapping are preferred in the middle of the wdg.

Two types of tapping. ✓

- 1) ON load tap changing
- 2) Off load tap changing

1) ON-load :- without disconnecting the load during loaded condition, tapings are automatically adjusted.

there is a vty sensitive relay at the secondary. which adjust the tapings automatically. all the modern xmers are provided OLTC.

This is for daily or frequent load vari

2.) Off-load T.C. control system

The x-over taps are adjust only after disconnecting from the supply. Not preferred for frequent tap changings. But preferred for seasonal load variations.

Per unit system in x-over