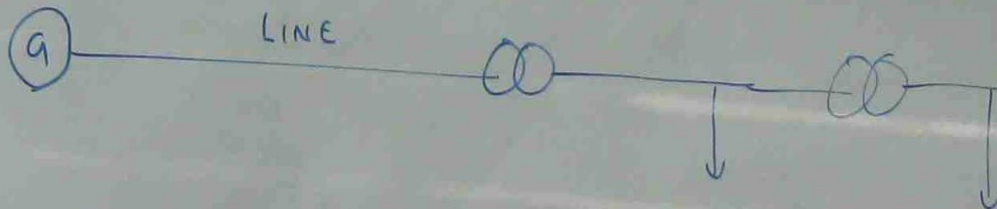


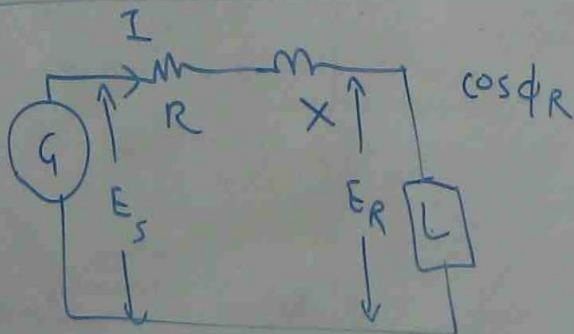
VOLTAGE REGULATION AND VOLTAGE PROFILE CHART



VOLTAGE REGULATION

THE VOLTAGE REGULATION IS DEFINED AS THE PERCENTAGE RISE IN VOLTAGE AT RECEIVING END WHEN FULL LOAD IS THROWN OFF, THE SENDING END VOLTAGE IS UNALTERED.

$$\text{VOLTAGE REGULATION} = \frac{E_S - E_R}{E_R} \times 100$$

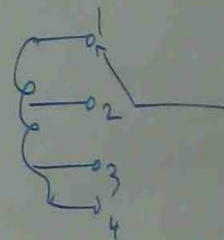


$$\text{VOLTAGE REGULATION} = \frac{I R \cos \phi_R + I X \sin \phi_R}{E_R}$$

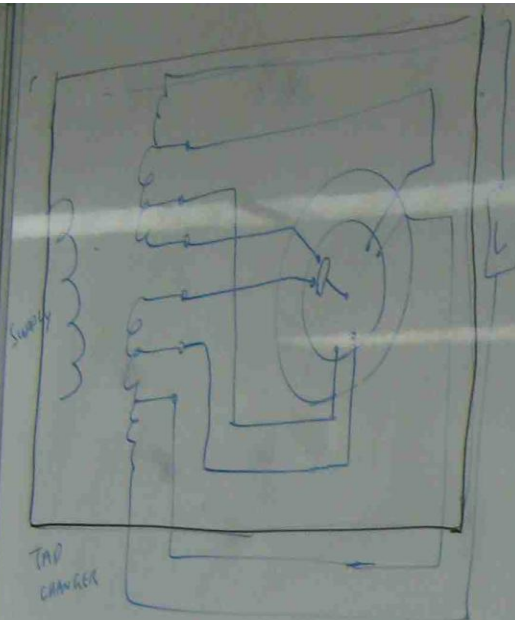
VOLTAGE REGULATOR

OFF LOAD TAP CHANGER

ON LOAD TAP CHANGER



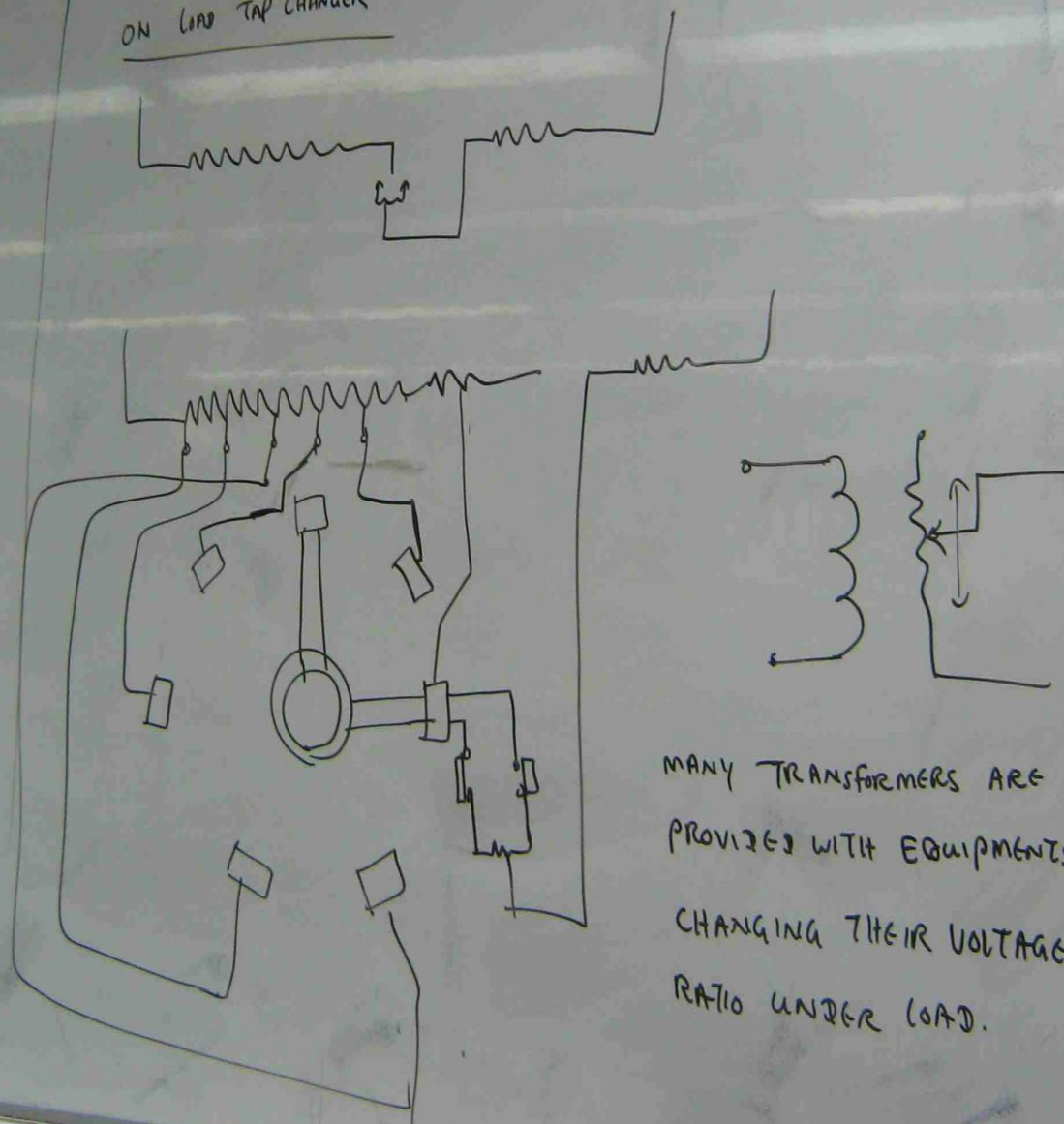
OFF LOAD BETWEEN TWO ADJACENT CONTACTS



OFF LOAD TAP CHANGER

$\pm 2\frac{1}{2}\%$ TO $\pm 5\%$ OF NOMINAL
VOLTAGE

ON LOAD TAP CHANGER



MANY TRANSFORMERS ARE
PROVIDED WITH EQUIPMENTS FOR
CHANGING THEIR VOLTAGE
RATIO UNDER LOAD.