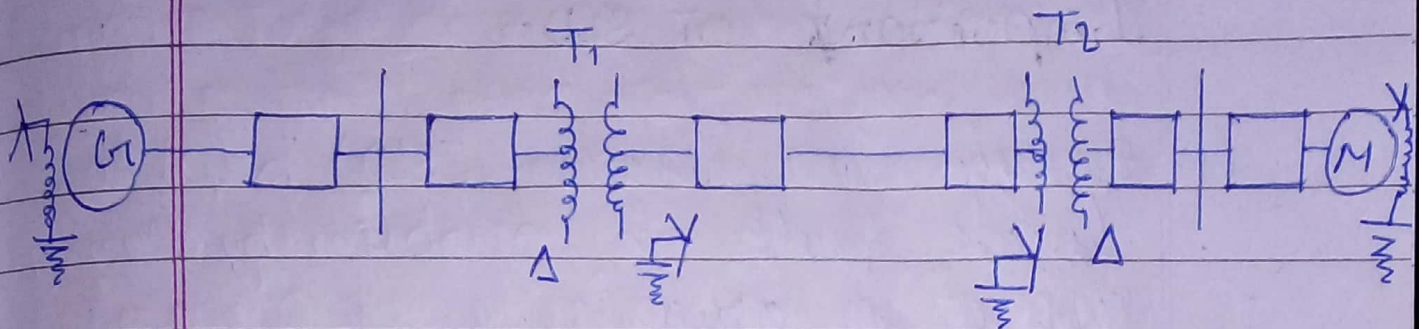


Single line diagram

The SLD of a power system n/w shows the main connections & arrangement of the system component along with their data such as output rating, voltage, resistance & reactance etc.



Generator

40 MVA, 11 kV, $x = 20\%$

Motor

30 MVA, 11 kV, $x' = 30\%$

Transformer T_1

40 MVA, 11/220 kV, $x'' = 15\%$

Transformer T_2

40 MVA, 220/11 kV, $x'' = 15\%$

| S.No | Component | Symbol |
|------|--------------------------|--------|
| 1 | Motor or generator | |
| 2 | Two winding transformer | |
| 3 | Transmission line | |
| 4 | Liquid (oil) ckt breaker | |
| 5 | Air ckt breaker | |

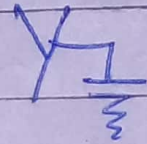
6 Delta connection



7 Y-connection, ungrounded



8 Y-connection, ground



• Important of SLD-

- (1) Single line diagram (SLD) helps to locate fault or problem by drawing SLD of a area.
- (2) The single line diagram can be termed as building an electrical system.