

SCOTT CONNECTION

Exp no: 7

Date

Aim: To obtain a balanced two phase supply from three phase system by using Scott connection.

Apparatus required:

S.no	Name of the Apparatus	Range	Type	Quantity
1.	Ammeter	(0-5,10)A	MI	3
2.	Volt meter	(0-150,300)V	MI	3
3.	Load			
4.	Variac			
5.	Connecting wires	2.5sq.mm	Copper /Aluminum	Few

Name plate details:

	Transformer 1	Transformer 2
KVA		
LV Voltage		
HV Voltage		
Frequency		

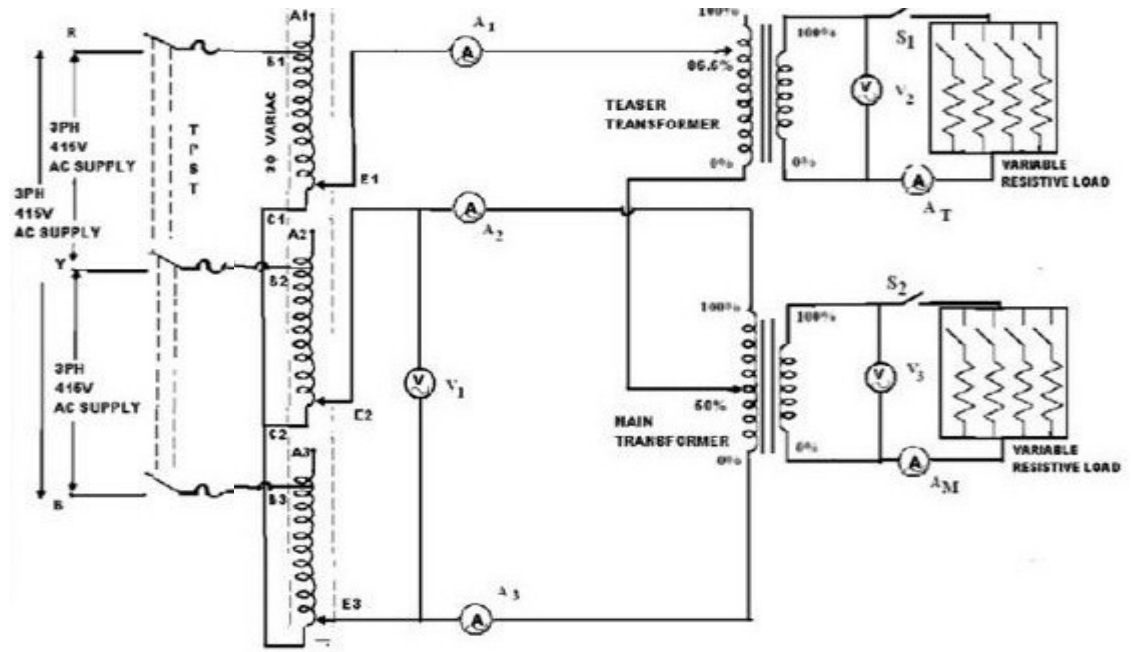
Precautions:

1. Loose connection must be avoided
2. Properly rated and required range meters should be used.
3. Taping ratio must be properly observed.

Procedure:

1. Connect as per circuit diagram.
2. Ensure that the switches S1,S2 and S3 are open.
3. Adjust the 3 phase variac from minimum voltage to its output.
4. Switch ON the AC supplies and apply the rated voltage across the primaries of transformers.
5. Record the voltage V1,V2 and V3 and verify that the output is a balanced two phase supply.
6. Switch ON the AC supplies again, adjust the output voltage of the variac as per the rated voltage of primaries of transformers.
7. Close the switches S1 and S2 to load both the secondary. Adjust equal loading condition also.
8. Switch OFF the load from both the secondary and adjust the variac, so that its output voltage is minimum and then switch OFF the supply.

Circuit diagram:



Observation Tables:

SL.NO.	V1	V2	V3

Formulae:

Vector sum of V1 & V2 should equal to $(V1^2+V2^2)^{0.5}$.

Result: thus three phase to two phase conversion is observed in Scott connection.