

Course Name:	Elements of Electrical and Electronics Engineering	Semester:	I
Name	Aayushi Pawar		
Date of Performance:	/ / 2020	Batch No:	B3
Faculty Name:	Sandeep Hanumante	Roll No:	16010121143
Faculty Sign & Date:		Grade/Marks:	/ 25

Experiment No: 9

Title: Measurement of Power using Two Wattmeter Method

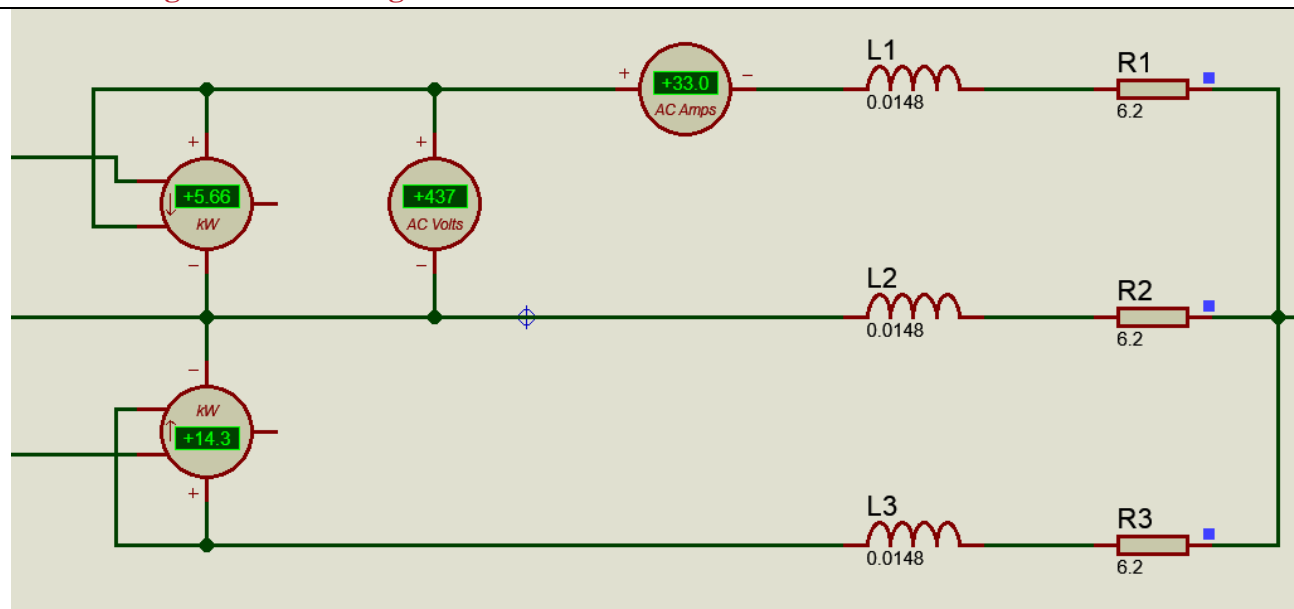
Aim and Objective of the Experiment:

- To measure the power of three phase power using Two Wattmeter Method

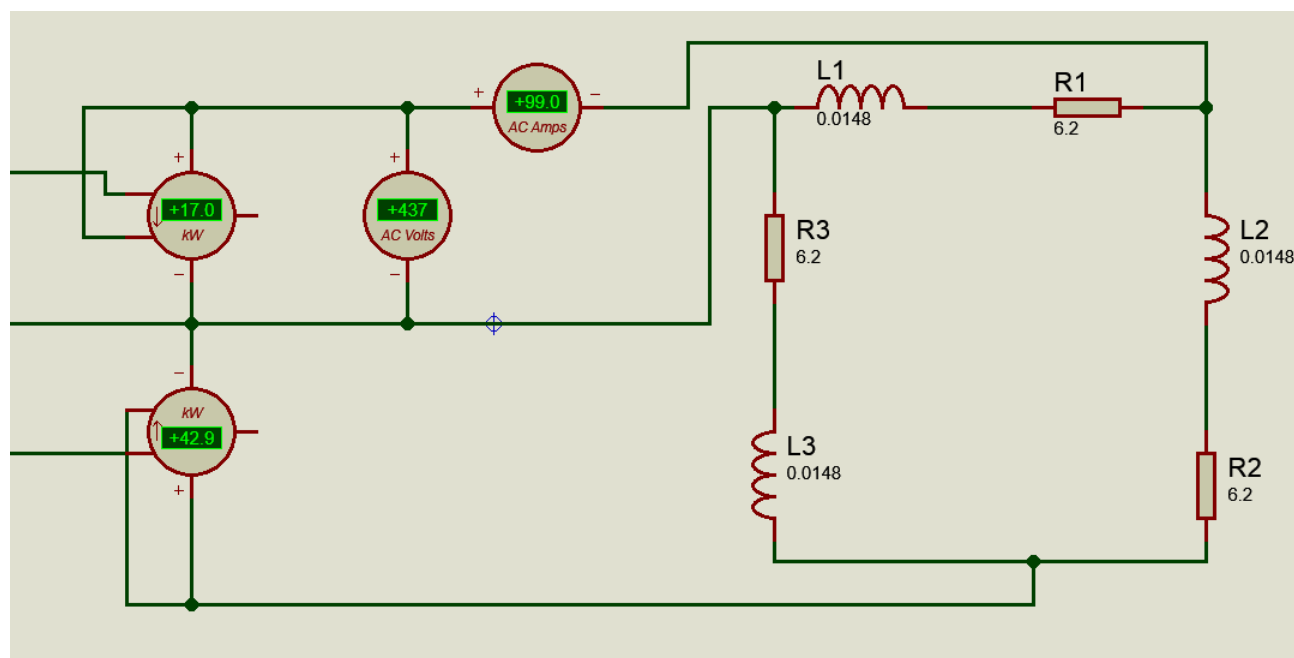
COs to be achieved:

CO1: Analyze resistive networks excited by DC sources using various network theorems.

Circuit Diagram/ Block Diagram:



$R1 = 9, L1 = 0.0191H, Z1 = 9 + j6.28 = 10.82 \angle 34.91^\circ$,
 $R1 = 9, L1 = 0.0495H, Z1 = 9 + j15.55 = 18.60 \angle 59.04^\circ$



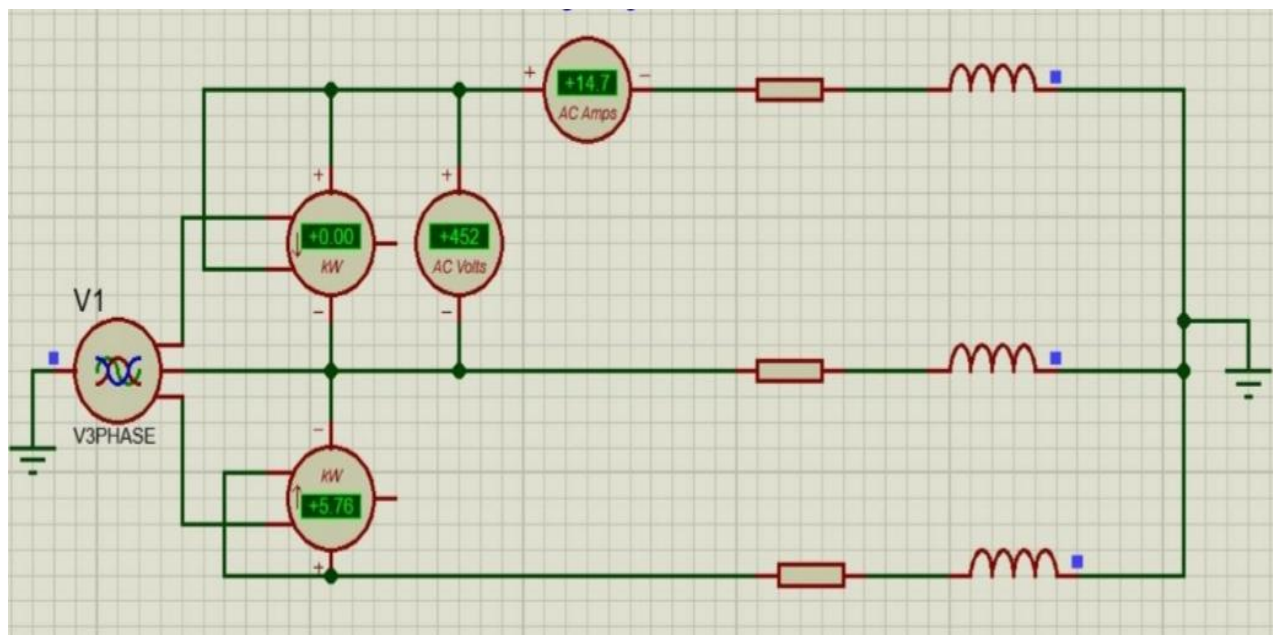
Stepwise-Procedure:

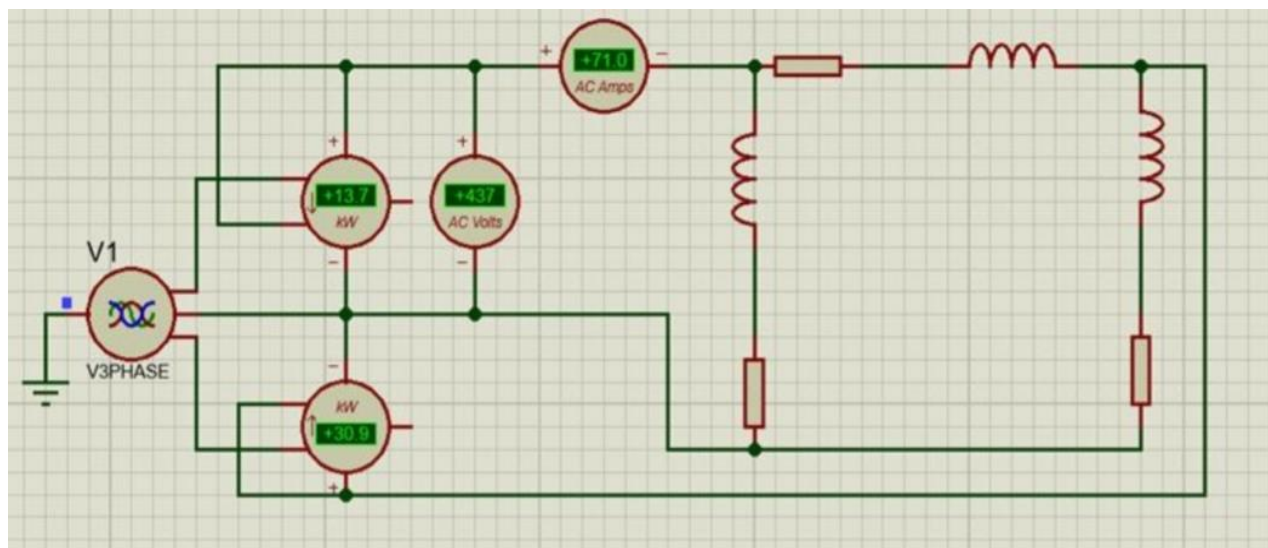
1. Connect the circuit as shown in circuit diagram
2. Increase the load and note down the reading V_L, I_L, W_1 and W_2
3. Practically you will obtain total power $W = W_1 + W_2$
4. Theoretically power is measured by using formula $P = \sqrt{3} V_L I_L \cos \phi$, using $\cos \phi = 1$ (unity) for resistive load.

Observation Table:

Sr.no	V _L v	I _L A		W ₁ KW		W ₂ KW		W=(W ₁ +W ₂)KW		P = $\sqrt{3}V_L I_L \cos\phi$
		TH	PR	TH	PR	TH	PR	TH	PR	
1	440	23.48	23.7	10.31	10.3	4.58	4.57	14.89	14.87	14.89
2	440	70.46	71	30.94	30.9	13.74	13.7	44.68	44.6	44.68
3	400	14.7	14.7	0	0	5.7	5.76	5.7	5.76	5.7
4	440	42.44	42.9	0	0	16.17	16.3	16.17	16.3	16.09

Screenshot of Output:





Conclusion:

We learned how to measure the power of three phase power using Two Wattmeter Method

Signature of faculty in-charge with Date: