



St. MARTIN'S ENGINEERING COLLEGE
An Autonomous Institute
NBA & NAAC A+ Accredited
DHULAPALLY, SECUNDERABAD-500100



Date: **19-05-2020**

POST EVENT REPORT

1. Department: **Electrical & Electronics Engineering**
2. Name of the event: **Webinar on Effective Methods for Reducing Fault Levels in Industrial Grid Networks**
3. Event Date: **18-05-2020**
4. Report submitted date: **19-05-2020**
5. Brief description about the event:

The Department of Electrical and Electronics Engineering has organized an Online Webinar on **Effective Methods for Reducing Fault Levels in Industrial Grid Networks** on 18/05/2020. This lecture was organized with an objective to upskill the faculty with potent methods for fault reduction in Industrial grids. The resource person for this event was Mr. T Vishnu Charan, DGM-Engineering, Electrical HOD for Oil and Gas Division, TATA Projects Ltd., Mumbai. The Webinar has started at 2.30 PM with a welcome note by Head of the Department. He welcomed the resource person and all the participants. In his welcome note Sir briefed about the college achievements, Department achievements and future plans. Around 449 faculty and research scholars from various engineering college/Universities were participated in the program from all over the country. Mrs. Sangeetha C N introduced the profile of resource person to all. The resource person started his lecture with introduction to fault current in Power System. Then he proceeded to Industrial distribution system and fault current of transformer due to impedance and fault reduction techniques. He also described about Series FACTS Devices and its real time applications with a case study and results. Faculties and students from various colleges had interacted with the resource person and clarified

their doubts. The event concluded with vote of thanks by Head of the department.

Report prepared by: **Sangeetha C N**

Sangeetha C N
Sign of Organizing Faculty

Dr. N Ramchandra
Sign of HOD

TABLE FROM IS 1180

- Industrial distribution starts from primary voltage of 33kV or 11kV/433V transformers or 6.6kV and secondary voltage with 433V.
- Transformer will be sized based on Industrial loads
- Ratings are standardised as per IS 1180.
- As per latest IS 1180-2014, efficiency of the transformers are improved by fixing losses at particular Impedance

Table 6 Maximum Total Losses Up to 11 kV Class Transformer (Class 7.8.1.1)

Sl No.	Rating (kVA)	Impedance (Percent)	Minimum Total Loss (W)						
			Energy Efficiency Level 1		Energy Efficiency Level 2		Energy Efficiency Level 3		
			50% Load	100% Load	50% Load	100% Load	50% Load	100% Load	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
ii	250	4.50	1050	3150	980	2930	820	2790	
iii	315	4.50	1100	3275	1025	3100	855	2750	
iv	400	4.50	1300	3875	1225	3450	1150	3330	
v	500	4.50	1600	4750	1510	4300	1410	4100	
vi	630	4.50	2000	5855	1860	5300	1745	4850	
vii	1000	5.00	3000	9000	2790	7700	2620	7000	
viii	1250	5.00	3600	10750	3300	9200	3120	8400	
ix	1600	4.75	4400	13400	4200	11400	3270	11300	
x	2000	5.25	5400	17000	5050	15000	4750	14700	
xi	2500	6.25	6500	20000	6150	18500	5900	17500	

$$I_F = I_{Full\ load} / \%Z \text{ KA}$$

- Percentage Impedance of transformer contributes Fault current

webinar -SMEC

CONCLUSION

This study and experiment is in 415V networks and analysis of reduction of fault current. reducing the fault current and profile compensation as well reduction of fault currents we of transformer impedances.

FACTS devices locating them FACTS devices in terms devices more suitable for active power and voltage effectiveness of switchgears and increasing

Zoom Group Chat

From 020687 to Everyone:
sir, can you explain for k factor considered for transformer during design. Do we consider this factor for harmonics only or for the other factors like labour rates, production, capability of plant and equipment.

From Vishnu V to Everyone:
SFCL is more costlier than FACTS

From d33786dc to Everyone:
Thank You team for a informative session... kindly provide us the PPT to our Mail id

To: Everyone

Any queries can be

St. Martin's Engi...

Vishnu charan

GURJALA SRIDHAR ...

Sheik Meera Bibi