CO-PO Mapping of Project in the area of Power System Protection

Title of the Project: Fault Current Limitation by Using Series Transformer

Area of the Project: Power System Protection

Methodology of the Project: Prototype model.

Name of the Supervisor: Mr. P. SAI SAMPATH KUMAR M. Tech, (Ph.D)

Name of the Students: D. KARTHIK KUMAR REDDY (17091A0226),
G. SREEDHAR REDDY (18095A0235),
B. VIJAYA BHARATHI (17091A0281).

.

Abstract:

This paper related to fault current limitation in radial distribution of network. In order to control fault current, primary winding of an isolation transformer is connected in series with phase line and secondary winding is connected to inductive coil (reactor), which is connected in parallel with a bypass switch i.e TRIAC. This system can improve the power quality of power system. This system also gives un- interrupted power supply. The magnitude of the current is reduced due to reactor connected in secondary winding. Because of simple structure cost is very low. This system is designed for single phase 230 volts, 50Hz ac supply.

Process of CO-PO attainment for Project thesis of IV-year Main Project

Course Outcomes:-

1. To identify the problem formulation of the project after literature survey or study of existing technology
2. To analyze the basic concepts of the project in correlation with the engineering knowledge
3. To apply the concepts of technology with modern tool usage to overcome the problem
4. To formulate the solution and to design simulation and prototype of the solution with the engineering knowledge.

R.G.M.C.E.T. Dept.of EEE NANDYAL

Head of Department
Electrical & Electronics Engineering
RGM College of Engineering & Tech.
Nandyal-518 501,Kurnool(Dist) A.P

Dr. T. JAYACHANDRA PRASAD
M.E,Ph.D.,FIE,FIETE,MNAFEN,MISTE,MIEEE
PRINCIPAL
R G M College of Engg. & Tech.,
(Autonomous)
NANDYAL-518 501, Kurnool (Dt), A.P.

CO-PO Mapping:-

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	-	-	-	3	-	-	-
CO2	2	-	2	-	-	-	-	-	3	-	-	-
CO3	2	-	-	-	-	-	-	-	3	-	3	-
CO4	2	-	2	-	2	-	-	-	3	-	3	-

Evaluation:-

Project work	100	External evaluation	This end viva voce in project work for 100 marks
	50	Internal evaluation	These 50 marks will be based on the performance of the student in the project reviews apart from attendance and regularity

Table: Percentage Weightages for each CO

S.NO	REG	IM 50M	EM grade	TM 150M	EM	%IM	%EM	CO1	CO2	CO3	CO4	N.C O1	N.C O2	N.C O3	N.C O4
1	17091A0226	49	10	143	94	98	94.00	25.57	31.57	19.05	19.04	95.91	94.7	95.2	95.24
2	17091A0281	43	9	128	85	86	85.00	22.78	28.37	17.05	17.04	85.42	85.12	85.25	85.25
3	18091A0235	45	10	143	98	90	98.00	25.04	32.10	19.05	19.04	93.91	96.31	95.24	95.24

R.G.M C.E.T. Dept.of EEE NANDYAL

Head of Department
Electrical & Electronics Engineering
RGM College of Engineering & Tech.
Nandyal-518 501,Kurnool(Dist) A.P

Dr. T. JAYACHANDRA PRASAD
M.E,Ph.D.,FIE,FIETE,MNAFEN,MISTE,MIEEE
PRINCIPAL
R G M College of Engg. & Tech.,
(Autonomous)
NANDYAL-518 501, Kurnool (Dt), A.P.

Table: Weightage marks for each CO

	CO1	CO2	CO3	CO4
INTERNAL	40	20	20	20
EXTERNAL	20	40	20	20
AVERAGE	26.66	33.33	19.99	19.99

Table: Percentage Attainment Values for each CO

	Co1				C02			C03			Co4	
Above & Equal 60%	3	3			3	3		3	3		3	3
Between 40-60%	0	2			0	2		0	2		0	2
Below40%	0	1			0	1		0	1		0	1
Total students	3				3			3			3	
Attainment value		**3.00**				**3.00**			**3.00**			**3.00**
% of attainment		100.00				100.00			100.00			100.00
Attained or not(GREATER 50% Y,NOT MEANS N		**Y**				**Y**			**Y**			**Y**

Head of Department
Electrical & Electronics Engineering
RGM College of Engineering & Tech.
Nandyal-518 501,Kurnool(Dist) A.P

Dr. T. JAYACHANDRA PRASAD
M.E,Ph.D.,FIE,FIETE,MNAFEN,MISTE,MIEEE
PRINCIPAL
R G M College of Engg. & Tech.,
(Autonomous)
NANDYAL-518 501, Kurnool (Dt), A.P.

FAULT CURRENT LIMITATION BY USING SERIES TRANSFORMER

A main project Submitted in partial fulfilment of the requirements

for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

ELECTRICAL AND ELECTRONICS ENGINEERING

Submitted by

D. KARTHIK KUMAR REDDY (17091A0226)

G. SREEDHAR REDDY (18095A0235)

B. VIJAYA BHARATHI (17091A0281)

Under the Esteemed Guidance of

Mr. P. SAI SAMPATH KUMAR M.Tech,(Ph.D)

ASSISTANT PROFESSOR in Dept. of E.E.E

(ESTD-1995)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

RAJEEV GANDHI MEMORIAL COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

(Approved by AICTE New Delhi, Accredited by NAAC-A^{+} Grade,

Accredited by NBA, Affiliated to J.N.T. University Ananthapur)

Nandyal-518501, Kurnool Dist., A.P

2017-2021

R.G.M C.E.T. Dept.of EEE NANDYAL

Head of Department
Electrical & Electronics Engineering
RGM College of Engineering & Tech.
Nandyal-518 501,Kurnool(Dist) A.P

Dr. T. JAYACHANDRA PRASAD
M.E,Ph.D.,FIE,FIETE,MNAFEN,MISTE,MIEEE
PRINCIPAL
R G M College of Engg. & Tech.,
(Autonomous)
NANDYAL-518 501, Kurnool (Dt), A.P.

RAJEEV GANDHI MEMORIAL COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

(Approved by AICTE New Delhi, Accredited by NAAC-A+ Grade,
Accredited by NBA, Affiliated to J.N.T. University Ananthapur)
Nandyal-518501, Kurnool Dist., A.P

(ESTD-1995)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE

This is to certify that the thesis entitled "FAULT CURRENT LIMITATION BY USING SERIES TRANSFORMER" that is being submitted by D. KARTHIK KUMAR REDDY (17091A0226), G. SREEDHAR REDDY (18095A0235), B. VIJAYA BHARATHI (17091A0281) have carried out the main project for the fulfilment of the award of Bachelor of Technology in Electrical and Electronics Engineering in Rajeev Gandhi Memorial college of Engineering & technology(Autonomous) and this is a record of bonafied record of the work done by them during 2020-2021. The results embodied in this project work have not been submitted to any other university or institute for the award of any degree.

Head of the Department

Dr.V. Naga Bhaskar Reddy M.E.,Ph.D.,MISTE
Professor
Dept. of EEE, RGMCET

Project Guide

Mr .P. SAI SAMPATH KUMAR M.Tech,(Ph.D)
Assistant Professor
Dept. of EEE, RGMCET

Signature of External Examiner:

Date:

R.G.M C.E.T. Dept.of EEE NANDYAL

Head of Department
Electrical & Electronics Engineering
RGM College of Engineering & Tech.
Nandyal-518 501,Kurnool(Dist) A.P

Dr. T. JAYACHANDRA PRASAD
M.E,Ph.D.,FIE,FIETE,MNAFEN,MISTE,MIEEE
PRINCIPAL
R G M College of Engg. & Tech.,
(Autonomous)
NANDYAL-518 501, Kurnool (Dt), A.P.

ABSTRACT:

This paper related to fault current limitation in radial distribution of network. In order to control fault current, primary winding of an isolation transformer is connected in series with phase line and secondary winding is connected to inductive coil (reactor), which is connected in parallel with a bypass switch i.e TRIAC. This system can improve the power quality of power system. This system also gives un- interrupted power supply. The magnitude of the current is reduced due to reactor connected in secondary winding. Because of simple structure cost is very low. This system is designed for single phase 230 volts, 50Hz ac supply.

R.G.M C.E.T. Dept.of EEE NANDYAL

Head of Department
Electrical & Electronics Engineering
RGM College of Engineering & Tech.
Nandyal-518 501,Kurnool(Dist) A.P

Dr. T. JAYACHANDRA PRASAD
M.E,Ph.D.,FIE,FIETE,MNAFEN,MISTE,MIEEE
PRINCIPAL
R G M College of Engg. & Tech.,
(Autonomous)
NANDYAL-518 501, Kurnool (Dt), A.P.