**NARAYANA ENGINEERING COLLEGE :: GUDUR**
(Approved by AICTE, Affiliated to JNTUA & An ISO 9001-2008 Certified Organization)
**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**Report for industrial visit**

# 400/220/132 KV SS NELLORE

## 1. INTRODUCTION

The 400KV/220KV/132KV Sub-station is located in Kagithalapuru Road ,Manubolu i.e on Nellore-Gudur road and is 27 KMs from Nellore centre.

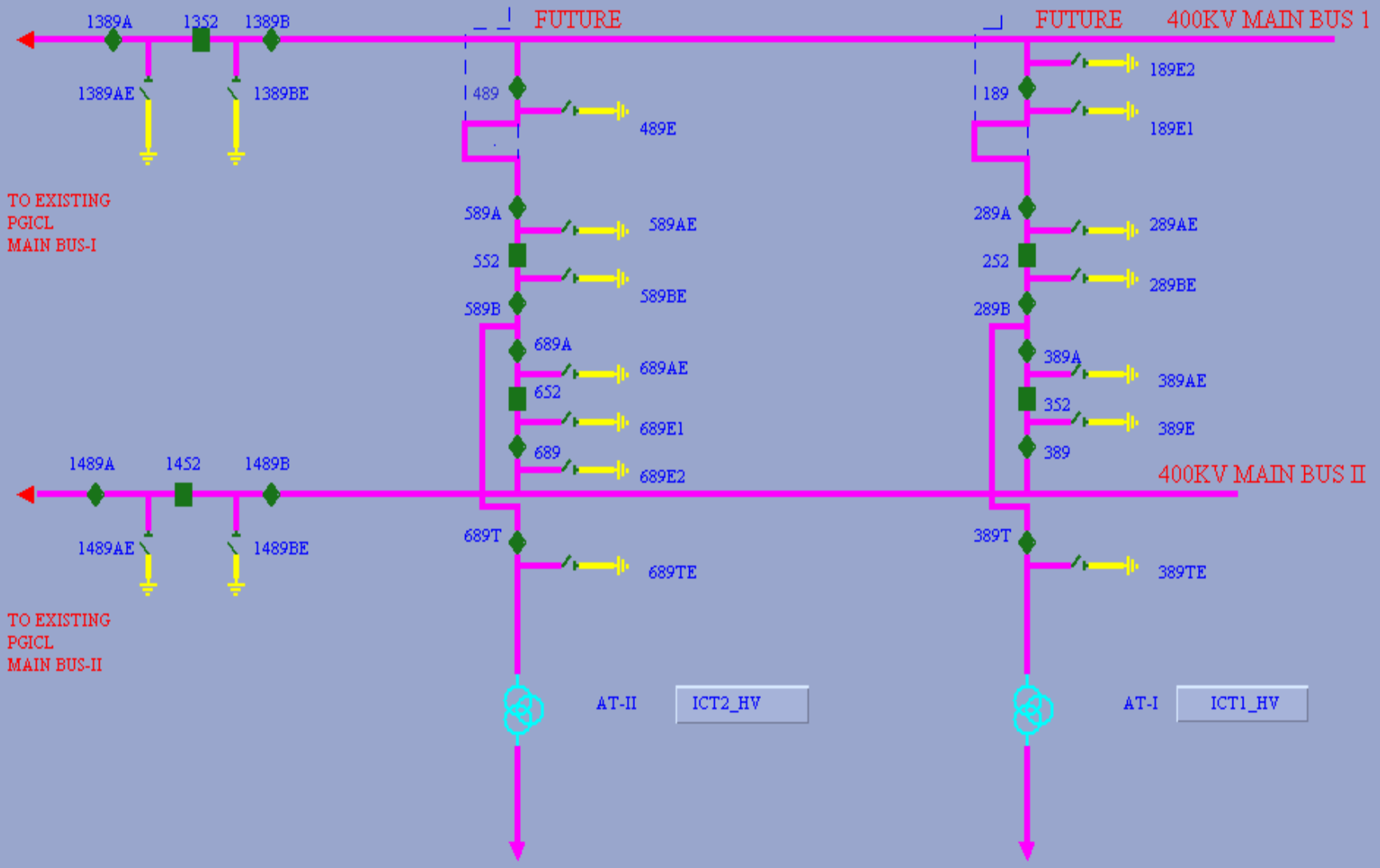
## 2.SOURCES OF SUPPLY

The 400 KVSS Nellore is adjacent to 400 KVSS PGCIL and both substation buses are connected through Bus sectionalizing breakers.

It consists of 2 no.s 400KV/220 KV Inter Connecting Transformers, 6 Nos 220 KV feeders, 2nos 220KV/132 KV Power transformers,5 nos 132 KV feeders to meet the load catered over the Nellore and Chittor districts.

The 400KV side one and half breaker system adopted.220 KV side double bus connected with bus coupler and with transfer Bus .132 Kv side single bus system.

# 400 KV SINGLE LINE DIAGRAM



**Layout:** Single line diagram of Sub-station with details of equipment is attached in the end of the booklet.

The following are the Transformers available in 400/220/132 KV Nellore Substation..

1. 2 no's 400/220KV,315 MVA Interconnecting Transformers of ABB make
2. 2 no's 220/132 KV,100 MVA PTR of Traffo-Union make
3. 2 no's 33kv/433 volts ,630 KVA Station Transformers

The following are the six numbers 220KV feeders available in 400/220/132 KV Nellore Substation..

1. 220KV Manubolu - Nellore circuit-I
2. 220KV Manubolu - Nellore circuit-II
3. 220KV Manubolu - Nellore circuit-III
4. 220KV Manubolu - Renigunta circuit-I
5. 220KV Manubolu - Renigunta circuit-II
6. 220KV Manubolu - Sullurpet circuit

The following are the five numbers 132 KV feeders available in 400/220/132 KV Nellore Substation..

1. 132KV Manubolu - Gudur circuit-I
2. 132KV Manubolu - Gudur circuit-II
3. 132KV Manubolu - SBQ steels circuit
4. 132KV Manubolu - Nellore circuit
5. 132KV Manubolu - Chendodu circuit

# SUBSTATION BAYWISE INFORMATION

**There are 14 bays in 400 KV yard**

1. Bay-1 is proposed line from krishnapatnam
2. Bay-2 is Tie Circuit breaker of Dia-1
3. Bay-3 is ICT-1 breaker of Dia-1
4. Bay-4 is proposed line from krishnapatnam
5. Bay-5 is Tie Circuit breaker of Dia-2
6. Bay-6 is ICT-1 breaker of Dia-2
7. Bay-7 is empty
8. Bay-8 is empty
9. Bay-9 is empty
10. Bay-10 is empty
11. Bay-11 is empty
12. Bay-12 is empty
13. Bay-13 is 1352CB i.e Sectionalizing breaker of BUS-I
14. Bay-13 is 1452CB i.e Sectionalizing breaker of BUS-II

**There are 16 bays in 220KV yard**

1. Bay-1 is ICT-I LV
2. Bay-2 is ICT-II LV
3. Bay-3 is Bus coupler
4. Bay-4 is 220KV Renigunta-I feeder

5. Bay-5 is 220KV Renigunta-II feeder
6. Bay-6 is 220KV Nellore-I feeder
7. Bay-7 is 220KV Nellore-II feeder
8. Bay-8 is 220KV Sullurpet feeder
9. Bay-9 is 220KV Nellore-III feeder
10. Bay-10 is 220KV Transfer Bus coupler feeder
11. Bay-11 is empty
12. Bay-12 is empty
13. Bay-13 is empty
14. Bay-14 is empty
15. Bay-15 is 100MVA PTR-II
16. Bay-16 is 100MVA PTR-I

**There are 2 nos 100MVA PTR LV bays and 6 feeder bays in 132KV yard**

**The Six feeder Bays are**

1. Bay-1 is 132KV Gudur-1 feeder
2. Bay-2 is 132 KV Nellore feeder
3. Bay-3 is Empty
4. Bay-4 is 132 KV SBQ Steel feeder
5. Bay-5 is 132 KV Gudur-II feeder
6. Bay-6 is 132 KV Chendodu feeder

**ACCOMPANYING STAFF MEMBERS: for II EEE students visited date 24/7/2017**

| | | | |
|---|---|---|---|
| 1. | Mr. N.Chenchaiah | Associate Professor | EEE |
| 2. | Mr Rajesh Reddy | Assistant Professor | EEE |
| 3. | Ms. V.Manasa | Assistant Professor | EEE |

**ACCOMPANYING STAFF MEMBERS: for III EEE visited date 22/7/2107**

| | | | |
|---|---|---|---|
| 1. | Mr. P.sudhakiran | Assistant Professor | EEE |
| 2. | Mr. G.Ashok kumar | Assistant Professor | EEE |
| 3. | Ms. Harika | Assistant Professor | EEE |

II EEE students and along with faculty photos 24/7/2017


TRANSMISSION CORPORATION OF ANDHRA PRADESH Ltd.
400/220/132 KV SUB STATION / NELLORE
MANUBOLU
S.P.S.R.NELLORE DIST.
400/220 KV SUB-STATION,NELLOR

III EEE students and along with faculty photos 22/7/2017