AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, Permanently Affiliated to JNT University Kakinada,
ACCREDITED BY NAAC and Recognized under 2(f) &12 (b) by UGC, New Delhi)
Tamaram(Village), Makavarapalem(Mandal), Visakhapatnam-531113

COLLABORATIVE INDUSTRIAL VISITS OF AIET
ACADEMIC YEAR
2017-18

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

S No	Name Of The Industry Visited	Batch/Class	Date	No of Students Visited
1	33/11KV SUB STATION, MAKAVARAPALEM	II B.TECH-EEE STUDENTS	01/02/2018	43
2	HYDRO ELECTRIC POWER PLANT, UPPER SILERU	III B.TECH-EEE STUDENTS	06/01/2018	55

Coordinator

HOD
Head of the Department
Department of Electrical & Electronics Engg.
Avanthi Institute of Engg & Tech.
Makavarapalem, Visakhapatnam - 531113.

Principal
Avanthi Institute of Engg. & Technology
Tamaram, Makavarapalem Md.,
Visakhapatnam District, Pin-531113

SEAL

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

REPORT ON INDUSTRIAL VISIT

33/11 KV SUBSTATION, MAKAVARAPALEM

DATE: 01-02-2018

SECTION: II YEAR –EEE

TOTAL STUDENTS: 43

EVENT: Industrial Visit

Faculty Coordinators:

1) P Anil Kumar, Asst.Prof.

2) P Varahala Dora, Asst.Prof.

EVENT DESCRIPTION: An industrial visit has been organized by department of Electrical and Electronics Engineering for II-year students on 01st February 2018.

The main objective of the visit was to provide a technical exposure to the students about the manufacturing process and technology. Total 43 students of II-year EEE visited 33/11 KV Substation Makavarapalem.

SESSION ACTIVITIES: The students were accompanied by 2 faculty members. The buses with students have started from our college at 10.30 AM on 01st February 2018 and reached the 33/11 KV Substation Makavarapalem by 10:45 AM.

ABOUT 33/11 KV SUBSTATION, MAKAVARAPALEM

33/11 KV Substation Makavarapalem A substation is a part of an electrical generation transmission, and distribution system. Substations transform voltage from high to low, or the reverse, or perform any of several other important functions. Between the generating station and consumer, electric power may flow through several substations at different voltage levels. 33/11 KV SUBSTATION is located at Makavarapalem, Visakhapatnam-531113

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

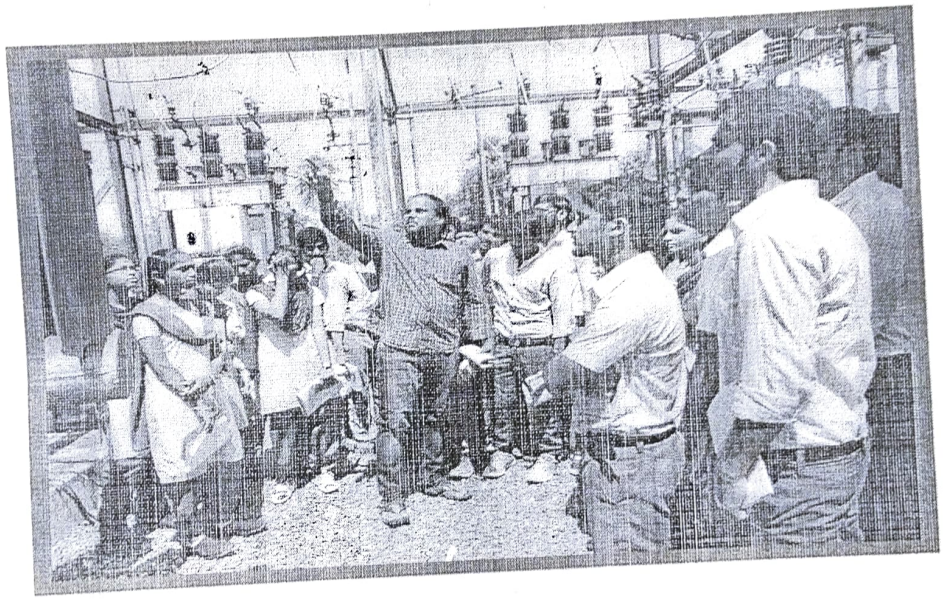
Year: II B Tech EEE

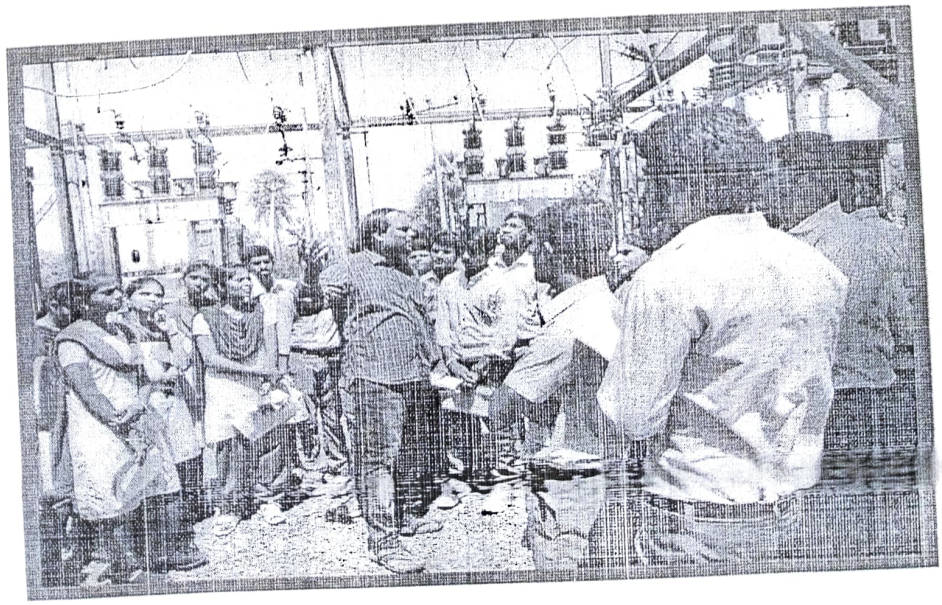
Date: 01-02-2018

Name of the Industry: 33/11 KV SUB-STATION, MAKAVARAPALEM

Name of the Faculty: 1. P ANIL KUMAR, Assistant Professor

2. P VARAHALA DORA, Assistant Professor





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UPPER SILERU HYDRO ELECTRIC SCHEME (4×60MW)

Preamble:

Upper Sileru Project is situated in the midst of Chintapalli agency in Visakhapatnam District. It is about 130 KM from Narsipatnam and 200 KM from Visakhapatnam. Water is drawn from a weir constructed across Sileru River at Guntawada 9 miles of Balimela Reservoir.

The Project is constructed in two stages. Under first stage, 2 units of 60MW each were commissioned at a cost of Rs. 18.5 Crores and another 2 Units of 60 MW each were commissioned under second stage at a cost of Rs. 47.5 Crores.

Salient Features:

- Location : Upper Sileru in Midst of Chintapalli Agency, 200 KM from VSP
- Category : Hydro Electric Project
- Capacity : 4 × 60 MW = 240 MW
- River : Sileru
- Dam : Fore Bay Dam
- No. of Units : 4 Nos
- Annual Energy Potential : 575 MU

Hydrology:

- Reservoir : Guntawada Reservoir
- Catchment Area : 1994 Sq. miles
- Max. flood discharge : 2,50,000 Cusecs
- Live Storage : 3.108 TMC Ft. (88 M.Cum)
- Gross Storage : 4.33 TMC
- Dead Storage : 0.712 TMC
- Generation Per TMC : 6.43 MU
- Design Head : 290 Ft.
- Net Head Max./Min : 310/290 Ft.
- Net Head Average : 304 Ft.
- Full Reservoir Level(FRL) : 1360.00 Ft.
- Min. Draw Down Level(MDDL) : 1333.50 Ft.
- Tail Race Water Level : 1045 Ft.
- Design Disch. Through Machine : 2592 Cusecs

Financial:

- Estimated Cost : Rs. 18.06 Cr.
- Actual Cost : Rs. 66.04 Cr.
- Assistance : APSEB
- Clearance by : CEA, MOE&F and PLG Commission GOI, 09/1973
- Cost of KW Installed : Rs. 15,417/- (Stage – I)
  Rs.,39,617/- (Stage-II)

Commissioning Details:

- Unit – I :14th October, 1967
- Unit – II : 31st March, 1968
- Unit – III : 31st March, 1994
- Unit – IV : 21st March, 1995

Technical:

Turbine

- Type : Francis Vertical
- Make : Excherwyss, Charmilies Switzerland (Stage – I), BHEL(Stage – II)
- Net Head : 90M
- Rated Output : 95000 BHP
- Normal Speed : 187.5 RPM
- Runway Speed : 350 RPM

Generator

- Type : Synchronous
- Make : Oerlikon, Switzerland(Stage – I), BHEL (Stage – II)
- Rated Voltage : 11KV
- Rated Output : 60MW/ 66.67 MVA
- Current : 3500A
- Speed : 300 RPM
- Power Factor : 0.9 Lag

Generator Transformer:

- Make : TELK, Angamally, Kerala
- Capacity : 25MVA, Single Phase (Out Door Type)
- Voltage Ration : 11KV/ 220KV

Transmission Line:

220KV, 3 Nos. (Stage – I)
220KV, 2 Nos. (Stage – II)

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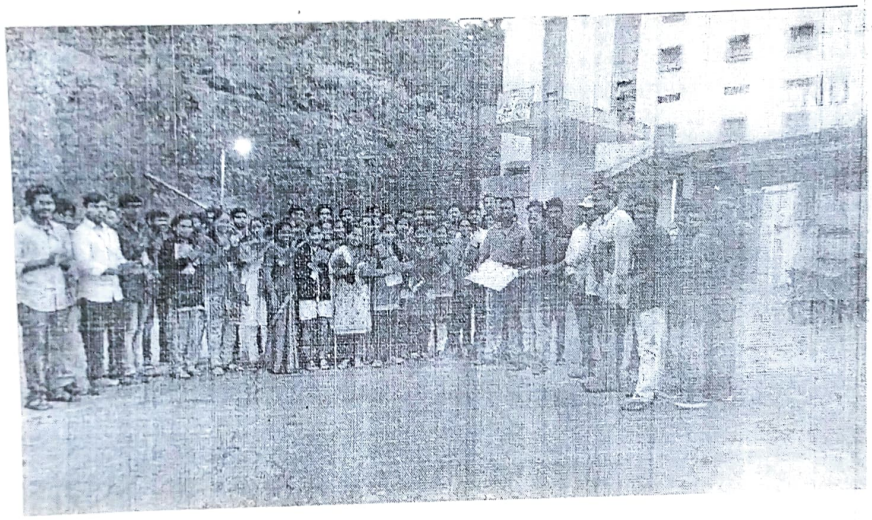
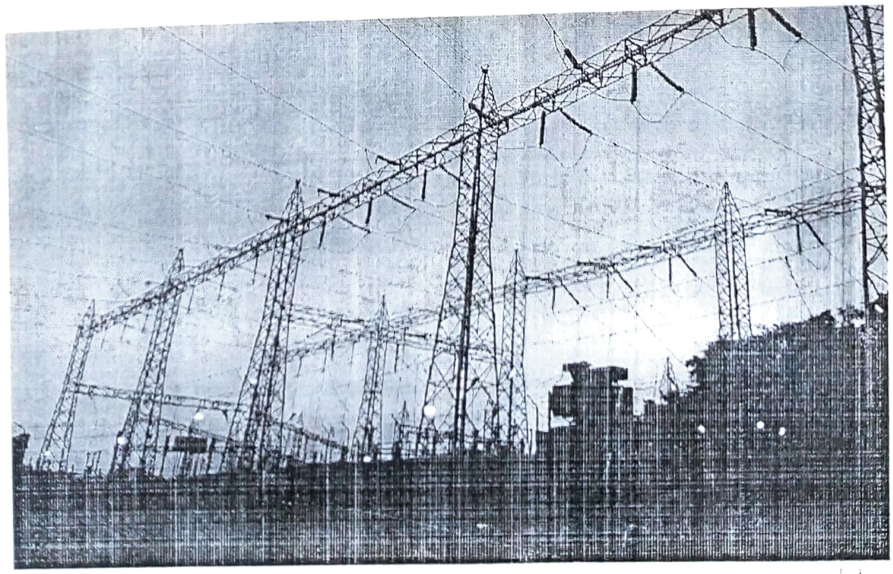
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

INDUSTRY VISIT ON 06-01-2018
SILERU HYDRO POWER PLANT





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