27-12-2021

Palakol

To

The Principal

Sri A. S. N. M. Govt. College (A),

Palakol, W.G. Dt.

Sub:-Request for Seeking Permission of field visit for B.Sc Students to Electrical Power substation, Palakol.

I wish you to bring to your kind notice that a batch of 50 Students of IIIrd B.Sc of Sri A. S. N. M. Govt. College (A), Palakol, W.G. Dt. along with 4 Faculty members of department of Chemistry are going to visit **Electrical Power substation**, Palakol on **28-12-2021** as part of their Curriculum. There are no foreign students in the group.

Hence I request you to extend your Co-operation and permit us to visit the Place/ Organization which is useful to the Students.

Thanking you

27/12/2021

Yours Sincerely

V. Yamini

DR.V.YAMINI

HOD of Chemistry

Sri A.S.N.M.GOVT.COLLEGE (A), PALAKOL

(NAAC RE-ACCREDITED WITH B GRADE (CGPA 2.61)

WEST GODAVARI Dist., A.P., Pin. 534260

NAAC ACCREDITED
B GRADE

DEPARTMENT OF CHEMISTRY

FIELD VISIT 28.12.2021

Sri A.S.N.M.GOVT.COLLEGE (A), PALAKOL, W.G.DT

NAAC RE-ACCREDITED WITH B GRADE (CGPA 2.61)
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B GRADE

DEPARTMENT OF CHEMISTRY

FIELD VISIT 28.12.2021

Sri A. S. N. M. GDC (A), PALAKOL Department of Chemistry conducted field visit to Electrical Power substation, Palakol for 3rd B. Sc students on 28.12.2021. 50 students from III B. Sc M.P.C, M.C.Cs & C.B.Z groups along with Four Lecturers of Dept. of Chemistry Dr. V. Yamini, Dr. S. B. Ronald, Dr. N. V. V. Simhadri & Dr. M. V. V. Ramanjaneyulu have participated in this Field Trip, to get the Knowledge of Chemistry in Every Day Life and to get practical experience about the Use of Chemistry in the power Station. Assistant Engineer Sri V. Nageswara Rao has explained about the use different Transformer Oils used in the substation to the students.

Signature of the Faculty: 1. V. Yamini

2.

3. M.V.V.Ramanjaneyulu

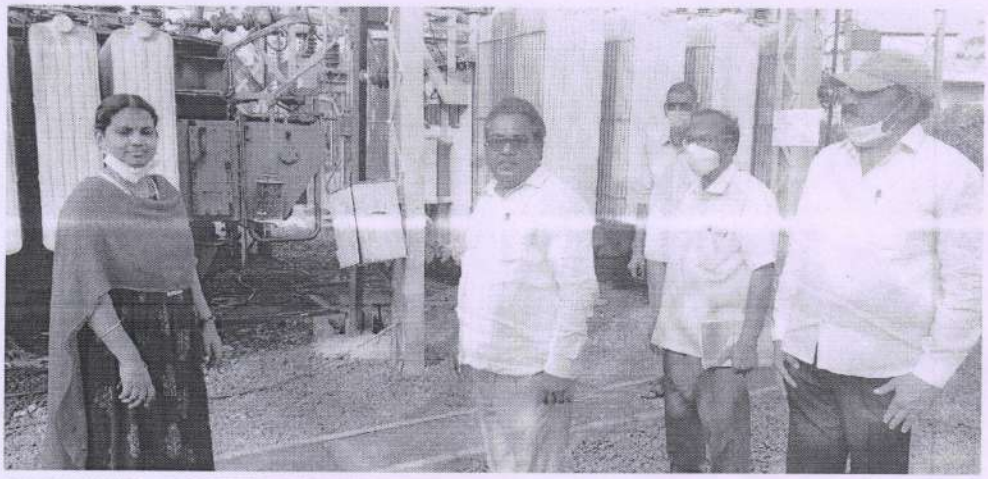
4. N.V.S.S.Simhadri

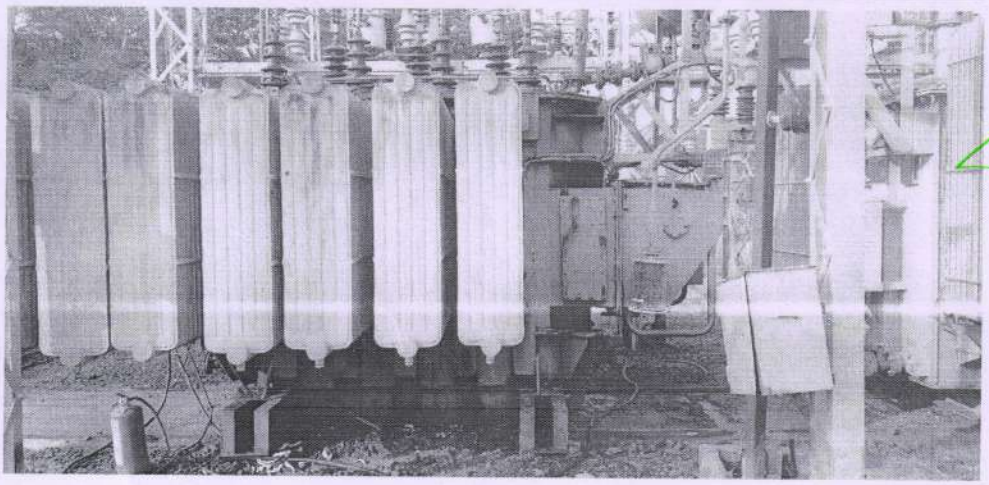
28/12/2021

Sri A. S. N. M. GOVT. COLLEGE (A), PALAKOL, W.G. DT

DEPARTMENT OF CHEMISTRY

FIELD VISIT - **Electrical Power substation, Palakol** 28.12.2021





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During this Field Visit Staff of Chemistry explained students about the importance of Transformer oil in our life and the students are able to understand the following facts about Transformer Oil.

Now a day we can't imagine our life without electricity. As we can't use the Direct Current (DC) from the open source, we use the Transformer to convert Alternating Current to Direct Current. To make the Transformer work and to insulate the Transformer, we use **Transformer Oil**. Transformer oil is also called as Insulating Oil.

A. Transformer oil mainly servers two purposes:

i) Liquid Insulation in electrical power transformer

ii) Dissipates Heat of the Transformer i.e Acts as Coolant

B. Properties of Transformer oil:

To perform the above functions, it must have

High Dielectric Strength,

Thermal Conductivity and

Chemical Stability.

C. Types of Transformer oil:

Three basic types of transformer oil used are

i) Mineral oil i.e Paraffinic and Naphthenic based oil,

ii) Silicone based oil and

iii) Bio-based oil.

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i) Mineral oil:

These are the petroleum products, like Naphthenic based transformer oil and Paraffinic based transformer oil and are generally effective as transformer oil, but these oils have some disadvantages.

If a transformer leaks mineral oil, it can potentially start a fire.

Mineral oil is also an environmental contaminant, and its insulating properties are rapidly degraded by even small amounts of water.

ii) Silicone based oil:

These are synthetic oils which are generally used in the fire-prone area because of its fire-retardant properties.

It also has few problems of low heat dissipation and high moisture absorbing capacity.

It is also costlier than mineral oil.

iii) Bio-based oil:

It is produced from vegetable oil feedstock.

Companies are investing more in bio-based transformers oil, as it is resistant to fire, electricity, heat and is bio-degradable.

Researchers are also investigating nanofluids for transformer use; these would be used as additives to improve the stability and thermal and electrical properties of the oil.

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List of the students Participated:

Sl.No	Name of the Student	Class & Group	Signature
1	M. Naveen kumar	III BSc (MCCS)	M. Naveen kumar.
2	A. Navya sri	III BSc (MPC)	A, Navya sri
3	B. Naga Durga Madhavi	III B.Sc (MPC)	B. Madhavi
4	Ch. Radha.	III BSc (MPC)	Ch. Radha.
5	G. RUPENDRA	III BSc (M.P.C)	G. Rupendra
6	G. Bhavani	III BSC (M.P.C)	G. Bhavani
7	G. Neelima	III BSc (mpc)	G. Neelima
8.	N. Lavanya	III BSc (MPC)	N. Lavanya
9	P. Laki babu	III BSc (MPC)	P. Laki babu
10,	R. Lakshmi Sujitra	III BSC (MPC)	R. Lakshmi Sujitra
11	T. Jahnavi	III BSC (MPC) (EM)	T. Jahnavi
12.	T. Yesumani	III BSC MPC (EM)	T. Yesumani
13.	V. Srivallika	III BSC MPC (EM)	V. Srivallika
14.	Y. Venkatalakshmi	III BSC MPC [EM]	Y. Venkatalakshmi
15.	Ch. Deepthi	III BSC MPC [EM]	Ch. Deepthi
16.	Ch. Sai naga lakshmi	III BSC MPC (T.M)	Ch. Sai naga lakshmi
17.	G. Srimuy.	III. BS.C. M.P.C. (T.M).	G. Srimuy.
18.	K. Yamini	III BSC MPC (T.M)	K. Yamini
19.	K. Sai lakshmi	III BSC MPC (T.M)	K. Sai lakshmi
20.	P. P. Siva krishna	III BSC MPC (T.M)	P. Siva krishna.
21)	N. Rajagopal	III B.SC MPC (TM)	N. Rajagopal
22)	M. Vijaya jyothi	III B.SC MPC (TM)	M. Vijaya jyothi
23	M. Durga Bhavani	III B.Sc MPC (T.M)	M. D. Bhavani
24	M. Naganani	III B.Sc MPC (TM)	M. Naganani
25	N. Nomeswari	III B.SC MPC (TM)	N. Nomeswari
26	G. Jashan Ganesh	III BSC BZC (EM)	G. J. Ganesh
27	K. Durga Bhavani	III BSC BZC (EM)	K. Durga Bhavani
28.	M. Anil Babu.	III BSC. BZC (EM)	M. Anil Babu.
29.	P. Pavan Kumar	III BSC BZC (EM)	P. Pavan Kumar
30.	T. KARTHIK BABU	III BSC (BZC) (EM)	T. Karthik Babu
31	T. Manasa	III BSC (BZC) (EM)	T. Manasa
32	y. Durga	III BSC (BZC) (EM)	y. Durga
33.	M. Madhuri	III BSC (BZC) (TM)	M. Madhuri
34.	M. usharani	III BSC (BZC) (TM)	M. usha Rani.
35.	K. Durga Lokesh	III BS.C (CBZ) (TM)	K. Durga Lokesh.
36.	K. Satya Vani	III B.S.C (CBZ) (TM)	K. Satya Vani

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37	I. Ganga Bhavani	III BSc(CBZ) TM	I. GangaBhavani
38	G. Hemanjali Javeri	III BSC (CBZ) TM	G, Hemanjali Javeri
39.	D. Mary	III BSC (CBZ) TM	D. Mary.
40	B. Ravichandu	III BSC [CBZ] TM	B. Ravichandu
41.	M. Aparna	III BSC (CBZ) TM	M. Aparna
42.	K. Hema.	III BSC (MBBC) TM	K. Hema.
43.	N.M. Rajeswari	III B.SC (BZC) T.M	N.M. Rajeswari
44.	S. Raj Kumar	III B.SC (BZC) T.M	S. Raj Kumar.
45.	M. Manika	III B.Sc (CBZ) T.M	M. Manika
46.	M. Sridevi	III B.SC (CBZ) TM	M. Sridevi.
47.	M. Rajakumari	III B.Sc (C.B.Z) TM	M. Rajkumari
48.	Sk. Mastana	III BSC (BZC) TM	Sk. Mastana.
49	U. Krishna veni	III BSC (BZC) TM	U. Krishnaveni
50	V. satya Durga	III B.SC (BZC) TM	V. satya Durga
51.	V. Rani	III B.SC (BZC) T.M	V. Rani
52	Y. Akshaya.	III B.SC (BZC) T.M	Y. Akshaya.
53.	N. Likhitha	III B.SC (B.ZC) T.M	N. Likhitha
54.	M. Narmada Ambika.	III B.SC (BZC) T.M	M. N Ambika.
55	M. Sindhu	III B.SC (BZC) T.M	M. Sindhu

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