

Library Research Activity

Report

Title: Library Research Activity Report on Polarity Test

Institution: Jhulelal Institute of Technology

Topic: Polarity Test

Researcher:

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3. Anjali Kashyap
4. Sneha Gour

1. Objective of the Research

The objective of this research was to understand the concept, purpose, methods, and applications of the Polarity Test. This includes its role in electrical engineering, electronics, and other related fields.

2. Research Process

a. Resources Used

- Books:

- "Ashfaq Hussain"
- PK. Mukherjee
- S. Chakravorti
- M.N. Bandyopadhyay
- "Polarity of Transformer" by Theodore wildi

- Journals & Articles:

Journal of Electrical Engineering & Technology

b. Search Methods

- Keywords Used: "Polarity Test," "Electrical Polarity Testing," "Transformer Polarity Test," "Polarity Check in Circuits"
- Search Strategy:
 - Used Boolean operators (AND, OR, NOT) to refine searches

c. Evaluation of Sources

- Credibility: Used books from reputable authors, peer-reviewed journal articles, and industry standards.

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- Relevance: Selected sources that directly discuss the definition, procedures, and importance of polarity testing in electrical circuits and equipment.

3. Findings

1. Definition of Polarity Test

A polarity test is conducted to determine the correct connections in electrical circuits, ensuring that components such as transformers, motors, and batteries function properly.

2. Types of Polarity Tests

- Transformer Polarity Test: Determines the phase relationship between primary and secondary windings.
- Battery Polarity Test: Ensures correct terminal connections in DC circuits.
- Circuit Polarity Test: Checks the correct wiring of AC and DC circuits.

3. Methods Used in Polarity Testing

- Direct Current (DC) Method: Uses a DC source and a voltmeter to check polarity.
- AC Voltage Method: Utilizes an AC supply to compare phase relationships.
- Multimeter Method: A common tool for checking polarity in electrical systems.

4. Applications of Polarity Testing

- o Ensures safe electrical installations.
- o Prevents damage to electrical devices.
- o Used in transformer testing to confirm proper winding connections.
- o Important in motor wiring to maintain correct rotation direction.



DTE Code: EN4139

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Vision: To develop Professional Electrical Engineer with advance technical knowledge for contribution to industry and society with ethical standards.



NAAC A+ Accredited

Date: 16/1/25

Feedback for Innovative Teaching Learning ProcessTL Process: Library ResearchDate of Conduction: 16/1/25Subject Teacher: Prof. S.A. kale sir**General Information:**Name of Student: Dnyanda Ajay BawiskarSubject/Semester: IV semYear of Admission: 2023-2024Email ID: bawiskardnyanda@gmail.com Mobile No.: 8329831302**A. Evaluation of Program Effectiveness:**

Please mention in the feedback column, the degree in the range 1 to 5 (as mentioned below) to which you believe that this TL process helped you to develop the skills and abilities in the following areas to be successful in your professional life:

1: Strongly Disagree,

2: Disagree

3: Moderately Agree

4: Agree

5: Strongly Agree

Sr. No.	Parameters	Feedback
1	Comprehend the basic knowledge of Electrical Engineering fundamentals.	5
2	Developed the skill to solve complex engineering problems.	5
3	Able to analysis an electrical-based system or program to meet desired needs with appropriate considerations such as economic / environmental.	4
4	Developed the skill to conduct experiments and to analyze, interpret data in electrical engineering.	4
5	Able to use the techniques, skills, and modern engineering & computational tools necessary for electrical engineering practices.	5
6	Comprehend the broad education necessary to understand the impact of contextual knowledge on social and cultural issues.	5
7	Enhanced the understanding of issues related to social & environmental context for sustainable development of engineering solutions.	4
8	Improved awareness regarding professional & ethical responsibility	4
9	Developed the ability to function effectively as an individual, as a member or leader in diverse & multidisciplinary teams.	5
10	Developed an ability to communicate effectively.	5
11	Enables you to understand the engineering & management principles to manage projects.	4
12	Developed a recognition of the need for, and an ability to engage in lifelong learning.	5

Bawiskar
Signature of Student