

SUMMER TRAINING REPORT
ON
TRANSFORMERS OIL ANALYSIS AND ITS SIGNIFICANCE
NTPC, SIPAT (CG)

A report submitted in partial fulfilment of the requirement for the award of
the degree of

BACHELOR OF TECHNOLOGY
IN
CHEMICAL ENGINEERING

Submitted By
Akhilesh Kumar Patel
Enrolment No: GGV/21/01554



DEPARTMENT OF CHEMICAL ENGINEERING
SCHOOL OF STUDIES IN ENGINEERING AND TECHNOLOGY
GURU GHASIDAS VISHWAVIDYALAYA
(A Central University)
Koni, Bilaspur Chhattisgarh – 495009, India

Index

CONTENTS

PAGE NO.

1. CHAPTER 1 -----	4 - 7
<ul style="list-style-type: none">• About Indian power sector• Mode of generation• Thermal power station• NTPC [National Thermal Power Corporation]	
2. CHAPTER 2 -----	8 - 12
<ul style="list-style-type: none">• Purpose of water chemistry in power plant• Importance of water chemistry in power generation	
3. CHAPTER 3 -----	13 - 21
<ul style="list-style-type: none">• An Overview of Water and Water Management Practices in Thermal Power Plants• Requirement of water for each application• Contaminants present in water• Water treatment plant	
4. CHAPTER 4 -----	22 - 28
<ul style="list-style-type: none">• Physical-Chemical parameters for testing of water	
5. CHAPTER 5 -----	29 - 40
<ul style="list-style-type: none">• Boiler water chemistry• Steam and condensate chemistry• Cooling water chemistry	
6. CHAPTER 6 -----	41 - 45
<ul style="list-style-type: none">• Corrosion and microbiological control	
7. CHAPTER 7 -----	46 - 49
<ul style="list-style-type: none">• Environmental considerations	
8. CHAPTER 8 -----	50 - 60
<ul style="list-style-type: none">• Case studies	
9. CHAPTER 9 -----	61 - 65
<ul style="list-style-type: none">• Conclusion• References	



REGIONAL LEARNING INSTITUTE, NTPC, SIPAT

क्षेत्रीय ज्ञानार्जन संस्थान, एनटीपीसी, सीपट

CERTIFICATE OF VOCATIONAL TRAINING - 2024

व्यावसायिक प्रशिक्षण प्रमाण पत्र - 2024

Ref No. RLI/SIPAT/VT/CERT/2024/VT-CHEM-010

THE CERTIFICATE IS AWARDED TO

Akhilesh Kumar Patel

Roll No - VT-CHEM-010

Branch - CHEM



Name of College/ Institute - Guru Ghashidas Vishwavidyalaya, Bilaspur

For satisfactorily completing **Vocational Training at NTPC, Sipat, Bilaspur** for a period of four weeks from 10/06/2024 to 13/07/2024. The participant has successfully completed the course and has also completed the project assigned to him/her as part of this course. We wish him/her a bright and successful future. This Certificate is digitally signed.

Date: 18/07/2024

Nakka Ramesh

Nakka Ramesh
Sr. Manager (RLI)

Anshul Rajan Singh

Anshul Rajan Singh
Sr. Manager (RLI)

AK Tripathi

AK Tripathi
GM & Head (RLI-Simulator)