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Guru Ghasidas Vishwavidyalaya
(A Central University Established by the Central Universities Act 2009 No. 25 of 2009)
Koni, Bilaspur – 495009 (C.G.)

Project Report

as part of

Vocational Training, NTPC SIPAT 2023

(JUNE-JULY 2023)

ON

Different Types of Air Preheaters Used inThermal Power Plant

Submitted by

CHAITANYA RAJ – GGV/20/01722

BACHELOR OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

SCHOOL OF STUDIES IN ENGINEERING AND TECHNOLOGY

BILASPUR, CHHATTISGARH

Contents

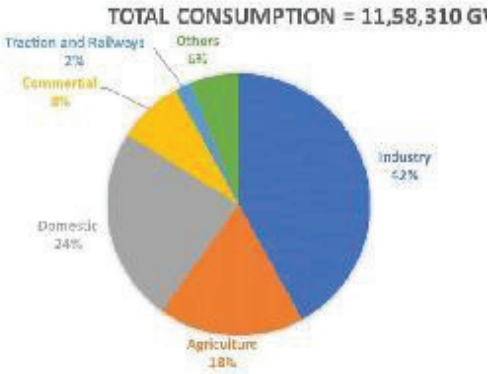
Chapter-1

Indian Power Sector (Problems, Goals, Achievements)

Demand/need of power in India and why it is increasing

India is the second most populous country in the world, with an approximate population of 1.4 billion people, accounting for about 16% of the global population. Furthermore, India possesses a vast agricultural sector, and its industries play a significant role in the country's development. Industrialization is on the rise in India, thanks to the presence of entrepreneurial companies and initiatives like "Make in India." All these sectors heavily rely on the availability of electricity and power to meet their demands and sustain growth. In light of this, ensuring a consistent and robust power supply becomes crucial for India's overall progress.

India's rapid economic growth over the pasttwo decades has been accompanied by a significant increase in power consumption.



This demand is especially pronounced during the summer months when people across the country rely on air conditioners and coolers to combat the heat. However, this surge indemand poses a challenge due to itsunpredictable nature. Furthermore, there are still numerous households and areas in India where access to electricity has not been established, and power supply in certain regions is not available round the clock.

Currently, meeting the power requirements of households, agriculture, and industries is challenging due to the insufficient installed capacity in comparison to the demand. Addressing this issue and ensuring a reliable and adequate power supply across the nation remains a pressing concern.

The growing population of India, coupled with the increasing electrification and per-capita usage, will further drive the demand for power. **In December 2022, power consumption in India witnessed a significant 11% growth, reaching 121.19 billion units.**

Currently, India stands as the third-largest producer and consumer of electricity globally. To meet the rising power demand, India is actively working on expanding its power generation capacity. Continuous efforts are being made to

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CERTIFICATE OF VOCATIONAL TRAINING -2023

औद्योगिक प्रशिक्षण प्रमाणपत्र-2023

Ref No. RLI/SIPAT/VT/CERT/2023/ VT2023MECH-217

THE CERTIFICATE IS AWARDED TO

CHAITANYA RAJ

VT Roll No – NTPC-VT2023MECH-217

MECHANICAL ENGINEERING

GGU , BILASPUR

For satisfactorily completing **Vocational Training at NTPC Sipat, Bilaspur** for a period of four weeks from 10/06/2023 to 10/07/2023. 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: 17.07.2023

G. PRAVEEN KUMAR
Sr Manager (RLI)

A K TRIPATHI
GM & Head (RLI-Simulator)