Department : Mechanical Engineering		
Academic Year: 2022-23		
Sr. No.	**Programme Code**	**Name of the Programme**
01.	217	B.Tech Mechanical Engineering

Following students have carried out their Project work/ Internship/ Field Project/Industrial Training for the academic session 2022-23

A

VOCATIONAL TRAINING REPORT

ON

AIR COOLED HEAT EXCHANGER

AT

R.S. ENGINEERING, KHAGARIA (BIHAR)

BY

AMAN KUMAR SINGH 20104004

BACHELOR OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

DEPARTMENT OF MECHANICAL ENGINEERING
SCHOOL OF STUDIES OF ENGINEERING AND TECHNOLOGY
GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (Chhattisgarh)

Session 2023-2024

INDEX

About R.S. ENGINEERING

Rs Engineering in Bhagalpur is one of the leading businesses in the Air Cooler Manufacturers. Also known for Diamond Manufacturers, Portable Air Cooler Manufacturers, Plastic Air Cooler Body Manufacturers, Air Cooler Manufacturers and much more.

Rs Engineering in, Bhagalpur is a top player in the category Air Cooler Manufacturers in the Bhagalpur. This well-known establishment acts as a one-stop destination servicing customers both local and from other parts of Bhagalpur.

Over the course of its journey, this business has established a firm foothold in its industry. The belief that customer satisfaction is as important as their products and services, have helped this establishment garner a vast base of customers, which continues to grow by the day. This business employs individuals that are dedicated towards their respective roles and put in a lot of effort to achieve the common vision and larger goals of the company.

Its vision for the future is centered on the development and production of cutting-edge Air-Cooled Heat Exchangers (ACHEs).

CERTIFICATE
OF COMPLETION

THIS IS TO CERTIFY THAT

Aman Kumar Singh

student of "Guru Ghasidas Vishwavidyalaya, Bilaspur(C.G.)" has undergone ***Vocational Industrial Traning in Heat Exchanger*** *at* ***R.S. Engineering*** *in* ***Mechanical Department*** *from 15.05.2023 to 15.06.2023.*

During the period of training, he was very active. He has taken an interest during the training period and I wish him all success.

Chief Executive Officer
Rakesh Roshan

PARTNER
R S ENGINEERING
KHAGARIA (BIHAR)

Managing Director
Shrikshitish Priyam

PARTNER
R S ENGINEERING
KHAGARIA (BIHAR)

VOCATIONAL TRAINING REPORT

ON

OVERHAULING OF COACHES AND WAGONS

AT

SOUTH EAST CENTRAL RAILWAY, BILASPUR

By: Annadaa Vivek Kalaskar (20104009)

Enrollment No.: GGV/20/01709

BACHELOR OF TECHNOLOGY
IN
MECHANICAL ENGINEERING

DEPARTMENT OF MECHANICAL ENGINEERING,
SCHOOL OF STUDIES AND TECHNOLOGY,
GURU GHASIDAS VISHWAVIDYALAYA,
KONI, BILASPUR (C. G.)

MAY-JUNE 2023

Table of Content

Introduction

Our Vocational Training was given by South East Central Railway (SECR). SECR is headquartered at Bilaspur. Due to this, Bilaspur is a big hub for repairing and maintaining of railways. Bilaspur is one of the biggest railway junctions of India. The vocational training was divided into two parts in which the first two weeks were covered in CHG Care Centre where passenger trains such as Express trains, Duronto Express, Rajdhani Express, Vande Bharat, etc. trains are repaired and cleaned and the remaiming two weeks were covered in at BCN coach depot where maintenance of wagons which carry coal and other goods are done. SECR also has an Electric Locomotive shop at Bilaspur where electrical Train engines undergo maintenance. It has recently been setup so it doesn't have all facilities as of now. So, for this internship only BCN depot and CHG care center were allotted to us.

First two weeks of training was done at CHG Care Centre where passenger trains are maintained. Here the training was further divided into two parts:

1. ICF coaches: 7 days
2. LHB coaches: 7days

The other two weeks were covered at BCN Wagon Depot where goods Wagon undergo Scheduled Maintenance. In BCN depot, all types of goods trains both open and closed were repaired and maintained.

One of the earliest production units of India was the Integral Coach Factory (ICF) which was inaugurated by our first Prime Minister Pandit Jawaharlal Nehru. The frame of the coach was made with mild steel and was a fabricated structure. Though it was the earliest coach model of India, the Linke Hofmann Busch (LHB) coach was better than the former in many terms. The Linke Hofmann Busch could operate at a higher speed in comparison to the Integral Coach Factory and its maximum permissible speed is 160 kilometres per hour. While the permissible speed for the ICF coach is just 110 kilometres per hour.

SOUTH EAST CENTRAL RAILWAY, BILASPUR

TO WHOM SO EVER IT MAY CONCERN

It is hereby certified that Ms. ANNADAA VIVEK KALASKAR *student of* "Guru Ghasidas Vishwavidyalaya (Central University), Bilaspur (C.G.)" *has undergone Vocational Training at* BCN Depot and Coaching Depot in Mechanical Engineering Department *of* SECR, Bilaspur Division *from* 25.05.2023 to 23.06.2023.

During this period of training she was very active. She has taken keen interest during the training period and has performed excellently. We wish her all success in her future endeavors.

Date : 03/07/23
Place -

Sr. Divisional Mechanical Engineer
South East Central Railway, Bilaspur(C.G.)

SIPAT SUPER THERMAL POWER PLANT

PROJECT REPORT

As a part of

VOCATIONAL TRAINNING, NTPC SIPAT 2023

Super critical and sub critical power plant

Differences in cycle design and efficiency

JULY 2023

Submitted by: BASAVALA SUDARSHANA RAO

(20104018)

CONTENTS

POWER SECTOR IN INDIA

Power is one of the most essential components of infrastructure and development in any country. India has a large and diverse power sector, which consists of generation, transmission and distribution of electricity from various sources, such as coal, natural gas, hydro, nuclear, wind, solar and biomass. The power sector plays a vital role in the economic growth and social welfare of the country, as well as in providing access to affordable and reliable electricity to all citizens.

India has witnessed a significant increase in its power generation capacity over the last few decades, due to various reforms and initiatives by the government and the private sector. According to the Ministry of Power, the total installed power capacity of India as of January 31, 2023 was 411.64 GW, of which 40.9% was from renewable sources (including hydro). The electricity generation target for the year 2023-24 has been fixed at 1750 BU, with a growth of around 7.2% over the previous year. India is also the third-largest producer and consumer of electricity worldwide, and the only country among the G20 nations that is on track to achieve the targets under the Paris Agreement.

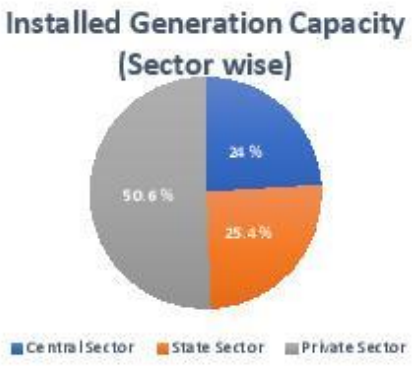
However, the power sector in India also faces several challenges and issues, such as demand-supply gap, transmission and distribution losses, financial distress of distribution companies, environmental concerns, regulatory hurdles, land acquisition problems, fuel availability and quality issues, etc. These challenges affect the performance and efficiency of the power sector and hamper its growth potential.

POWER GENERATION CAPACITY AND PERFORMANCE

The power generation capacity of India can be classified into two categories: conventional and non-conventional sources. Conventional sources include coal, natural gas, oil, hydro and nuclear power. Non-conventional sources include wind, solar, biomass, waste to energy and small hydro power.

The following table shows the Installed Generation Capacity (Sector Wise) as on 30.04.2023:

Sector	MW	% of Total
Central Sector	1,00,055	24.0%
State Sector	1,05,726	25.4%
Private Sector	2,10,810	50.6%
Total	**4,16,591**	



REGIONAL LEARNING INSTITUTE, NTPC SIPAT

क्षेत्रीय ज्ञानार्जन संस्थान,एनटीपीसी,सीपत

CERTIFICATE OF VOCATIONAL TRAINING -2023

औद्योगिक प्रशिक्षण प्रमाणपत्र-2023

Ref No. RLI/SIPAT/VT/CERT/2023/ VT2023MECH-238

THE CERTIFICATE IS AWARDED TO

BASAVALA SUDARSHANA RAO

VT Roll No – NTPC-VT2023MECH-238

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)

गुरु घासीदास विश्वविद्यालय
(केन्द्रीय विश्वविद्यालय अधिनियम 2009 क्र. 25 के अंतर्गत स्थापित केन्द्रीय विश्वविद्यालय)
कोनी, बिलासपुर – 495009 (छ.ग.)

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

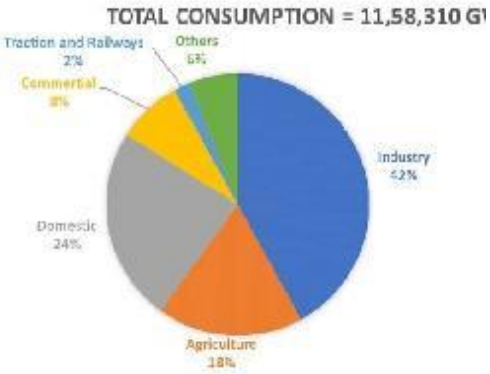
Chapter-1

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

REGIONAL LEARNING INSTITUTE, NTPC SIPAT

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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)

CONSTRUCTION AND MAINTENANCE OF COMPRESSORS

A mini project report submitted as a part of the vocational training in utilities Department, RASHTRIYA ISPAT NIGAM LIMITED,VISAKHAPAATNM

DEPARTMENT OF MECHANICAL ENGINEERING

Submitted By

PAPPALA JAGADEESH **TRAINEE NO : 100016877**

UNDER THE GUIDANCE OF

Sri. SATYA PRASAD Sir

Dy. GENERAL MANAGER (MECHANICAL ,UTILITIES DEPARTMENT)

RINL,VISAKHAPATNAM

DEPARTMENT OF MECHNICAL ENGINEERING

SCHOOL OF STUDIES OF ENGINEERING AND TECHNOLOGY

GURU GHASIDAS VISHWAVIDYALA (A CENTRAL UNIVERSITY)

KONI, BILASPUR,CHATTISGARH

RASHTRIYA ISPAT NIGAM LIMITED

VISAKHAPATNAM STEEL PLANT

DEPARTMENT OF UTILITIES

Certificate of appreciation

This is to Certify that this project report entitled "**CONSTRUCTION AND MAINTENANCE OF COMPRESSORS**" has being submitted in partial fulfillment for the award of degree of BACHELOR OF TECHNOLOGY in Department of Mechanical Engineering is a inplant training carried out by

PAPPALA JAGADEESH **TRAINEE NO : 100016877**

Their work as project trainee in appreciated and conduct was found good.

I wish them good luck in all his future Endeavour.

EXTERNAL GUIDE:

Sri. Satya Prasad Sir

Dy. GENERAL MANAGER (MECHANICAL)

UTILITIES DEPARTMENT

RINL,VISAKHAPATNAM

CONTENTS

राष्ट्रीय इस्पात निगम लिमिटेड
(भारत सरकार का उद्यम)
विशाखपट्टणम इस्पात संयंत्र
विशाखपट्टणम

RASHTRIYA ISPAT NIGAM LIMITED
(A Government of India Enterprise)
Visakhapatnam Steel Plant
Visakhapatnam

ISO 9001:2015, ISO 14001, ISO 50001, ISO 27001 & OHSAS 18001 Certified Company

अधीगम और विकास केंद्र
Learning and Development Center

Reg.No. : 100016877

प्रमाणपत्र Certificate

प्रमाणित किया जाता है कि श्री /This is to certify that Mr./Ms. **PAPPALA JAGADEESH** student of (वर्ष/पाठ्यक्रम/शाखा - Year/Course/Branch) **3/BE/B TECH/MECHANICAL/INDUSTRIAL & PRODUCTION/INDUSTRIAL** विद्यार्थी ने from **GURU GHASIDAS VISWA VIDYALAYA,BILASPUR** से has undergone **4 Week** प्रशिक्षण training विशाखापत्तनम इस्पात संयंत्र के at Visakhapatnam Steel Plant in **UTILITIES** विभाग में department from दि. **08-05-2023** to **03-06-2023** प्राप्त तक किया । परियोजना शीर्षक The Project Title is **CONSTRUCTION AND MAINTAINANCE OF COMPRESSORS** है। प्रशिक्षण अवधि में उनका आचरण His/Her conduct during the period of training is **GOOD** है।

स्थल/Place : Visakhapatnam

दि./Date : 03-06-2023

M Ganesh Babu
AGM (Trg.)
Learning & Development Centre
RINL, Visakhapatnam steel plant
Visakhapatnam

एनटीपीसी
NTPC

PROJECT REPORT ON

ELECTROSTATIC PRECIPITATOR IN POWER PLANT

Submitted to

G. Praveen Kumar
Sr Manager (RLI)

AK Tripathi
GM & Head (RLI-Simulator)

Vikash Malhotra
DGM (RLI-Simulator)

By VT GROUP 11

1

TEAM MEMBERS

1. **RATUL KHADOTRA**
VT2023MECH-253

GIANI ZAIL SINGH COLLEGE CAMPUS OF EDUCATION AND TECHNOLOGY.

2. **SANSKAR GUPTA**
VT2023MECH-253

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY BHOPAL (MANIT BHOPAL)

3. **ANMOL KUMAR**
VT2023MECH-260

NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR

4 **SOUMYA RATHORE**

VT2023MECH-258

ASPIRE TO EXCEL

BHILAI INSTITUTE OF TECHNOLOGY, DURG (C.G).

2

5 MADHU KUMARI RATRE
VT2023MECH-254

NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

6 KUMAR CHANDAN
VT2023MECH-259

GURU GHASIDAS UNIVERSITY

7 ASHUTOSH YADAV
VT2023MECH-255

GURU GHASIDAS UNIVERSITY

8 **Divyansh Gupta**
VT2023MECH-252

NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

9 NISHANT KUMAR
VT2023MECH-261

GURU GHASIDAS UNIVERSITY

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REGIONAL LEARNING INSTITUTE, NTPC SIPAT
क्षेत्रीय ज्ञानार्जन संस्थान,एनटीपीसी,सीपत

CERTIFICATE OF VOCATIONAL TRAINING -2023
औद्योगिक प्रशिक्षण प्रमाणपत्र-2023

Ref No. RLI/SIPAT/VT/CERT/2023/ VT2023MECH-259

THE CERTIFICATE IS AWARDED TO

KUMAR CHANDAN

VT Roll No – NTPC-VT2023MECH-259

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)

Project based Internship Report on

DESIGN CONSIDERATION OF HEAT EXCHANGERS UNDER HIGH PRESSURE SYSTEMS

A report submitted as part of project based training in Air Separation Plant, Visakhapatanam Steel Plant

Name	Trainee Number
MAINAK GHOSH	**100017369**

Under the able guidance of

Mr. K BALASUBRAMANIAN

DGM (TECH), Utilities Department

Rashtriya Ispat Nigam Limited (RINL), Visakhapatnam

(Duration – 8th May, 2023 to 3rd June, 2023)

CONTENTS

VISAKHAPATNAM STEEL PLANT

Visakhapatnam steel plant is the first coastal based steel plant of India. Rashtriya Ispat Nigam Limited (RINL) is the corporate entity of VSP. It is located 16 km south west of the City of Destiny, Visakhapatnam. The company also has Blast Furnace grade Limestone captive mine at Jaggayyapeta, a captive mine for Dolomite at Madharam, a Manganese ore captive mine at Cheepurapalli. It also has a mining lease for river sand of river Chapavathi. Bestowed with modern technologies, VSP has a capacity to produce 3 million tons of liquid steel and 2.656 million tons

राष्ट्रीय इस्पात निगम लिमिटेड
(भारत सरकार का उद्यम)
विशाखपट्टणम इस्पात संयंत्र
विशाखपट्टणम

RASHTRIYA ISPAT NIGAM LIMITED
(A Government of India Enterprise)
Visakhapatnam Steel Plant
Visakhapatnam

ISO 9001:2015, ISO 14001, ISO 50001, ISO 27001 & OHSAS 18001 Certified Company

अधीगम और विकास केंद्र
Learning and Development Center

Reg.No. : 100017369

प्रमाणपत्र Certificate

प्रमाणित किया जाता है कि श्री /This is to certify that Mr./Ms. **MAINAK GHOSH** student of (वर्ष/ पाठ्यक्रम/शाखा - Year/course/Branch) **3/BE/B TECH/MECHANICAL/INDUSTRIAL & PRODUCTION/INDUSTRIAL** विद्यार्थी ने from **GURU GHASIDAS VISWA VIDYALAYA,BILASPUR** से has undergone **4 Week** प्रशिक्षण training विशाखापत्तनम इस्पात संयंत्र के at Visakhapatnam Steel Plant in **UTILITIES** विभागों मे department from दि. **08-05-2023** से **03-06-2023** प्राप्त तक किया | परियोजना शीर्षक The Project Title is **DESIGN CONSIDERATION OF HEAT EXCHANGERS OF HIGH PRESSURE SYSTEM** है। प्रशिक्षण अवधि में उनका आचरण His/Her conduct during the period of training is **GOOD**है|

स्थल/Place : Visakhapatnam

दि./Date : 03-06-2023

M Ganesh Babu
AGM (Trg.)
Learning & Development Centre
RINL, Visakhapatnam steel plant.
Visakhapatnam

VOCATIONAL TRAINNG REPORT
ON
Power generation by hydraulic machines
AT
ESSEL PROJECTS PVT.LTD. , RAIPUR

BY

MUKESH KUMAR- 20104046

BACHELOR OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

DEPARTMENT OF MECHANICAL ENGINEERING
SCHOOL OF STUDIES AND TECHNOLOGY, CHHATISHGARH
JUNE- JULY 2023

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TRAINING CERTIFICATE

ESSEL PROJECTS PVT. LTD.

CIN : U45209CT2007PTC008651
CORP. OFFICE : NO.5, 1ST FLOOR, MARUTI HERITAGE, NEAR RWL PACHPEDI NAKA RAIPUR, CHHATTISGARH - 492 001, Tel. : 0771-4268469, Fax : 0771-4075401
E-mail : info@esselprojects.com, Web : www.esselprojects.com

CERTIFICATE

Date: 04/July/2023

This is to certify that Mr. Mukesh Kumar S/o Mr. Bilash Manjhi studying B.TECH in Mechanical Engineering 3rd Year bearing Roll.No.: 20104046 at Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.) has undergone Internship Training at our Essel Projects Pvt. Ltd. Raipur, Chhattisgarh 492001 from 05/June/2023 to 04/July/2023. The candidate has taken specific training in Power Construction and about project components.

We have observed that the candidate is having hard working nature and sincere during the training period and wish him for better prospects in studies as well as in career.

Place: Raipur

Date: 04/July/2023

Vocational Training Report

ON

Manufacturing & Assembly

At

Shree Rajasthan Enterprises Ajmer

By

Pulkit Vyas
Roll No. - 20104057
Enroll. No. - GGV/20/01755

Batchelor of Technology
In Mechanical Engineering
Department of Mechanical Engineering
School of Studies of Engineering & Technology,
Guru Ghasidas Vishwavidyalaya
(A Central University), Bilaspur, Chhattisgarh

Table Of Content

Estd. : 2007 | |Jai Shree Ram| | Mob. 9829076324
GST No. 08AAAHF0157M1ZC 7230066111

SHREE RAJASTHAN ENTERPRISES
NEAR MAKHUPURA FARBATPURA EXT.,
PLOT NO. 14, KHASRA NO. 506SENDARIYA (AJMER) 305002 (Raj.)
Email: shreerajasthanenterprises@gmail.com
Website: www.sremachines.com Date: 22.06.2023

It is hereby certified that **Mr. Pulkit Vyas** student of "**Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)**" has undergone Industrial Training at Manufacturing & Assembly Workshop in Mechanical Department from 15.05.2023 to 15.06.2023.

During the period of training he was very active. He has taken keen interest during the training period and I wish him all success.

for SHREE RAJASTHAN ENTERPRISES

For SHREE RAJASTHAN ENTERPRISES
Authorised Signatory
Proprietor

Project Report as part of Vocational Training,
NTPC SIPAT
On the topic:

ASH DISPOSAL SYSTEMS AND UTILISATION IN POWER PLANTS

Submitted by VT-MECH-GR-06:

S.NO.	NAME	INSTITUTE	ROLL NUMBER
1.	Amrit Shukla	National Institue of Technology Jamshedpur	VT2023-MECH202
2.	Adarsh Kumar Lal	Odisha University of Technology and Research Bhubaneswar	VT2023-MECH203
3.	Rajesh Kumar Pradhan	Guru Ghasidas Vishwavidyalaya Bilaspur	VT2023-MECH204
4.	Pawan Kumar	Guru Ghasidas Vishwavidyalaya Bilaspur	VT2023-MECH205
5.	Aditi Vishwakarma	Indira Gandhi Institute of Technology Sarang	VT2023-MECH206
6.	Akarsh Mishra	National Institute of Technology Jamshedpur	VT2023-MECH207
7.	Prasenjit Roy	Jadavpur University	VT2023-MECH208
8.	Mukund Dewangan	Bhilai Institute of Tecnology Durg	VT2023-MECH209
9.	Ankit Kumar	Guru Ghasidas Vishwavidyalaya Bilaspur CG	VT2023-MECH210
10.	Ritwick Kumar Mandal	National Institute of Technology Raipur	VT2023-MECH211

INDEX

ABOUT NTPC

NTPC Limited, also known as National Thermal Power Corporation Limited, is an Indian public sector undertaking which is engaged in the generation of electricity and allied activities. The headquarters of the company is situated in New Delhi. NTPC's core function is the generation and distribution of electricity to State Electricity Boards in India. The body also undertakes consultancy and turnkey project contracts that involve engineering, project management, construction management, and operation and management of power plants.

It is the largest power company in India with an electric power generating capacity of 67,907 MW. NTPC currently operates 55 power stations (24 Coal, 7 combined cycle gas/liquid fuel, 2 Hydro, 1 Wind, and 11 solar projects). Further, it has 9 coal and 1 gas station, owned by joint ventures or subsidiaries.

It was founded by the Government of India in 1975, which now holds 51.1% of its equity shares (after the divestment of its stake in 2004, 2010, 2013, 2014, 2016, & 2017). In May 2010, NTPC was conferred Maharatna status by the Union Government of India, one of only four companies to be awarded this status. It is ranked 400th in the Forbes Global 2000 for 2016.

The company has developed a long-term plan to become a 128000 MW company by 2032. NTPC Limited is on an expansion spree to meet the power requirements of the country – it has targeted to add 14,058 MW in the 12th Plan (from FY13 to FY 17) of which it had already added 4,170 MW in 2012–13, 1835 MW in 2013-14 1290 MW in 2014-15 and 1150 MW from April 2015 to 30 November 2015.

REGIONAL LEARNING INSTITUTE, NTPC SIPAT
क्षेत्रीय ज्ञानार्जन संस्थान,एनटीपीसी,सीपत

CERTIFICATE OF VOCATIONAL TRAINING -2023
औद्योगिक प्रशिक्षण प्रमाणपत्र-2023

Ref No. RLI/SIPAT/VT/CERT/2023/ VT2023MECH-204

THE CERTIFICATE IS AWARDED TO

RAJESH KUMAR PRADHAN

VT Roll No – NTPC-VT2023MECH-204

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)

INTERNSHIP PROJECT BASED ON

PRODUCTION OF QUALITY CASTING OF MANGANESE STEEL (FOUNDRY)

Under the guidance of
MR. VIDYA SAGAR
Dy. GM(ES&F)

Rashtriya Ispat Nigam Limited (RINL), Visakhapatnam
(Duration of 08th May 2023 to 03th June 2023)

PROJECT CERTIFICATE

राष्ट्रीय इस्पात निगम लिमिटेड
RASHTRIYA ISPAT NIGAM LIMITED
VIZAG STEEL
Pride of Steel

This is to certify that the project report entitled "**PRODUCTION OF QUALITY CASTING OF MANGANESE STEEL**" is a Bonafide record of the work done by **MORRI VEERA SAIBARGOV** student of **Central University of Chattisgarh (Guru Ghasidas Vislwavidyalaya)**in the Bachelor of Technology in Production Engineering in the duration of the period from 08-05-2023 to 03-06-2023 in **ENGINEERING SHOPS & FOUNDRY** in Rashtriya Ispat Nigam Limited. This project work was carried out by the student under my guidance and supervision.

Date: 03-06-2023
Place: Visakhapatnam.

Mr. P. Vidya Sagar
Deputy General Manager (DGM)
Foundry
RINL-VSP

ACKNOWLEDGEMENT

First of all, I thank God in words for his grace, who gave me the opportunity and strength to carry out this work. The success and outcome of this project review required a lot of guidance and assistance from many people and we are incredibly privileged to have got this all along with the completion of our project.

Our sincere thanks to **Mr. VIDYA SAGAR**, Foundry Shop, Engineering Shops & Foundry, Visakhapatnam Steel Plant, for his encouragement and valuable suggestions.

Our sincere thanks to **Mr. KRISHNA PRASAD**, Foundry Shop, Engineering Shops & Foundry, Visakhapatnam Steel Plant, for his encouragement and valuable suggestions.

I take this opportunity to sincerely thank **Mr. KONDAL RAO**, Foundry Shop, Engineering Shops & Foundry, Visakhapatnam Steel Plant, whose advice and guidance has helped me to complete my project work successfully.

I take this opportunity to sincerely thank **Mr. RAMANA MURTHY**, Foundry Shop, Engineering Shops & Foundry, Visakhapatnam Steel Plant, whose advice and guidance has helped me to complete my project work successfully.

I feel grateful to Mr. Subhramanyam, Pattern Shop, Engineering Shops & Foundry, Visakhapatnam Steel Plant, for his valuable suggestions and encouragement towards the completion of my project work.

I feel grateful to Mr. Srinivas, Foundry Shop, Engineering Shops & Foundry, Visakhapatnam Steel Plant, for his valuable suggestions and encouragement towards the completion of my project work.

I wish to express my sincere thanks to ES&F Dept. employees of Visakhapatnam Steel Plant for their valuable guidance in completing this project.

I also wish to express my sincere thanks to all the employees of Visakhapatnam Steel Plant who gave me lifts to reach the plant and gain technical knowledge all over the plant.

राष्ट्रीय इस्पात निगम लिमिटेड
(भारत सरकार का उद्यम)
विशाखपट्टणम इस्पात संयंत्र
विशाखपट्टणम

RASHTRIYA ISPAT NIGAM LIMITED
(A Government of India Enterprise)
Visakhapatnam Steel Plant
Visakhapatnam

ISO 9001:2015, ISO 14001, ISO 50001, ISO 27001 & OHSAS 18001 Certified Company

अधीगम और विकास केंद्र
Learning and Development Center

Reg.No. : 100016696

प्रमाणपत्र Certificate

प्रमाणित किया जाता है कि श्री / This is to certify that Mr./Ms. **MORRI VEERA SAIBARGOV** student of (वर्ष/पाठ्यक्रम/शाखा - Year/course/Branch) **3/BE/B TECH/MECHANICAL/INDUSTRIAL & PRODUCTION/INDUSTRIAL** विद्यार्थी ने from **GURU GHASIDAS VISWA VIDYALAYA,BILASPUR** से has undergone **4 Week** प्रशिक्षण training विशाखापत्तनम इस्पात संयंत्र के at Visakhapatnam Steel Plant in **ENGINEERING SHOPS & FOUNDRY (ES&F)** विभागों मे department from दि. **08-05-2023** से to **03-06-2023** प्राप्त तक किया | परियोजना शीर्षक The Project Title is **PRODUCTION OF QUALITY CASTINGS OF MANGANESE STEEL** है। प्रशिक्षण अवधि में उनका आचरण His/Her conduct during the period of training is **GOOD**है|

स्थल/Place : Visakhapatnam

दि./Date : 03-06-2023

M Ganesh Babu
AGM (Trg.)
Learning & Development Centre
RINL, Visakhapatnam steel plant.
Visakhapatnam

VOCATIONAL TRAINING REPORT

ON

IRRIGATION AND WATER RESOURCES

AT

RIHAND DAM, PIPRI, SONBHADRA, UTTAR PRADESH

IRRIGATION DEPARTMENT

BY

SWATHI SINGH – 20104065

BACHELOR OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

DEPARTMENT OF MECHANICAL ENGINEERING

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR(C.G.)

JUNE-JULY 2023

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IRRIGATION AND WATER RESOURCES DEPARTMENT
UTTAR PRADESH

No. 561 Dated 19-07-2023

CERTIFICATE

This is to certify that Ms. Swathi Singh student of BTech (Mech) Engineering from Guru Ghasidas Vishwavidyalya, Koni, Bilaspur (C.G.) his completed the summer training in Rihand Dam Civil Division, Pipri-Sonebhadra under guidance of Assistant Engineer Mechanical (II Sub Division) from 02-06-2023 to 02-07-2023.

I wish him a bright future and success in his academic life and career.

19/07/23
Executive Engineer
Rihand Dam Civil Division
Pipri - Sonebhadra

VOCATIONAL TRAINING REPORT

ON

WINDMILL TOWER MANUFACTURING

AT

GRI TOWERS INDIA PRIVATE LIMITED

BY

VIDAVALURU VAMSI – 20104069

BACHELOR OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

DEPARTMENT OF MECHANICAL ENGINEERING

SCHOOL OF STUDIES AND TECHNOLOGY, CHHATTISGARH

MAY-JUNE 2023

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