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

ABSTRACT

1) INTRODUCTION

- a. Visakhapatanam Steel Plant
- b. Production Units of VSP

2) UTILITIES

- a. About
- b. Production Units

3) AIR SEPARATION PLANT

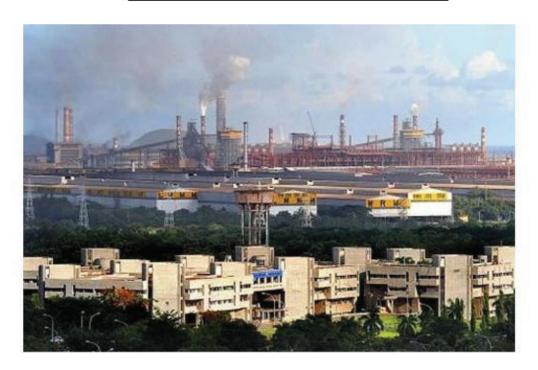
- a. Introduction
- b. Features
- c. Products and Applications
- d. Air Separation Process
- e. Refrigeration in ASP
- f. Vapour Compression Refrigeration System

4) HEAT EXCHANGER

- a. Introduction
- b. Types of Heat Exchangers
- c. Applications
- d. Shell and Tube Heat Exchangers

5) CONCLUSION

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



Guru Ghasidas Vishwavidyalaya

(A Central University Established by the Central Universities Act 2009 No. 25 of 2009)

Koni, Bilaspur - 495009 (C.G.)





राष्ट्रीय इस्पात निगम लिमिटेड (भारत सरकार का उद्यम) विशाखपुट्टणम 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 में department from दि. 08-05-% 023 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 GOODहैं।

स्पल/Place : Visakhapatnam

दि./Date: 03-06-2023



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