**CONTENTS**

ACKNOWLEDGEMENT……………………………….………………………

DECLARATION…………………………………………………………………

ABSTRACT……………………………………………………………………1-2

ABOUT INSTITUTION……………………………………………………….3-4

ABOUT COMPANY…………………………………………………………..5-8

1- NTRODUCTION…………..……………………………………… …….. 9-12

1.1- HISTORY OF READY MIX CONCRET

1.2- ADVANTAGES OF RMC

1.3- DISADVANTAGE OF RMC

1.4- BACKGROUND

1.5- FACTORS DELAYING ENTRY OF RMC IN INDIA

1.6- FACTORS THAT PROMPTED INTRODUCTION OF RMC

2- READY MIX CONCRETE PLANT ……………………………………..12-19

2.1-INTRODUCTION

2.2- MANUFACTURING PROCESS

2.3- MAJOR COMPONENTS

2.4- MECHANICAL EQUIPMENT

2.4.1- BATCHING

2.4.2- SILOS

2.4.3- BELT CONVEYOR

2.4.4- TRANSIT MIXER

3- MATERIAL USED IN RMC ………………………………………………20-25

3.1- AGGREGATE

3.1.1 COARSE AGGREGATE

3.1.2 FINE AGGREGATE

3.2 CEMENT

3.3 ADMIXTURE

# 3.3.1 TYPES OF ADMIXTURES

4- QUALITY CONTROL TEST………………………………………………..26-34

4.1 TESTS ON CEMENT

4.1.1 FINENESS

4.2 TESTS ON AGGREGATES

4.2.1 SIEVE ANALYSIS

4.2.2 CALCULATION

4.3 AGGREGATE IMPACT VALUE

4.4 DENSITY OF AGGREGATE

### **4.5 CALCULATION FOR COMPACTED BULK DENSITY**

5. - CONCRETE MIX DESIGN CONCEPT…………………………………….35-46

5.1 DEFINITION

5.2DESIGN OF CONCRETE MIX

5.3 IMPORTANCE OF MIX DESIGN

5.3.1 INTRODUCTION

5.3.2 CONSIDERATION OF DESIGN

5.3.3 CONDITION OF DESIGN

5.4 QUALITY CONTROL OF CONCRETE MIX DESIGN

5.5 MAJOR FACTORS AFFECTING CONCRETE MIX DESIGN

5.6 CONCRETE MIX DESIGN PROCEDURE AS PER INDIAN STANDARD RECOMMENDED GUIDELINES (IS:10262-1982)

5.7 METHOD OF ESTIMATION OF WATER CEMENT RATIO BASED ON ACCELERATED STRENGTH TEST.

6.1 ADVANTAGES OF CONCRETE MIX DESIGN…………………….48-54

## 6.2 CONCRETE MIX DESIGN EXAMPLE – M50 GRADE CONCRETE

7.1 CONCLUSION…………………………………………………….............54

7.2 REFERENCES………………………………………………………………55