STANDARD OPERATING PROCEDURE			
Department: Engineering			
Title: Specifications of Mixed Bed			
SOP No.		**Revision No.**	
Effective Date		**Supersedes No.**	
Review Date		**Page No.**	1 of 3

1.0 OBJECTIVE:

The purpose of this SOP is:

1.1 To describe the procedure for specifications of Mixed Bed Unit.

2.0 SCOPE:

2.1 This SOP is applicable for the procedure for Specification of Mixed Bed Unit.

3.0 RESPONSIBILITY:

4.2 The Maintenance Engineer shall be responsible:

4.2.1 Responsible for maintaining the specifications during replacement of resins.

4.0 ACCOUNTABILITY:

Head –Engineering Services

5.0 PROCEDURE:

5.1 TYPES OF RESINS:

5.1.1 Following are the specifications to be followed for selection of resins used in the Mixed Bed processing units.

5.1.1.1 CATION RESIN:

5.1.1.2 ANION RESIN**:**

5.2 MIXED BED RESINS:

5.2.1 Make : ……..

5.2.2 Type : MONO + 100S(NA+)
MONO + 600 S (CL-)

5.2.3 Description: This is a strong base anion exchange resin in bead form having benzyl ammonium groups. And it is based on cross-linked

polystyrene and has an isoporous structure. And it is based on cross-linked polystyrene and has an isoporous structure. It has a very high basicity and is effective in removing silica and carbon dioxide. This grade is used for high quality de- ionized water.

5.2.4 Physical form : Moist beads

5.2.5 Wet screen grading : 0.3-1.2 mm

5.2.6 Volume change : +9% (Chloride to Hydroxide form)

5.2.7 Shipping weight : 725 kg/m^3

5.2.8 Ionic form as supplied: Chloride

5.2.9 Maximum operating temperature: 600ºC in hydroxide form and 900ºC in Chloride form.

5.2.10 Operating pH range : 0-14

5.2.11 Resistance to oxidizing agents: Chlorine should be absent

5.2.12 Total Mixed Bed capacity: 60 kg $CaCO_3/m^3$

5.2.13 **Regenerant for regeneration:** Sodium hydroxide, having the Concentration of 100% w/v.

5.3 **ANALYSIS OF RESINS:**

5.3.1 Analysis of the Mixed Bed resins to be done in every year for its performance and Efficiency. Such analysis reports to be kept preserved for maintaining history of resin.

6.0 ANNEXURES:

Nil

8.0 References (S):

Nil

9.0 Glossary:

STANDARD OPERATING PROCEDURE

Department: Engineering			
Title: Specifications of Mixed Bed			
SOP No.		**Revision No.**	
Effective Date		**Supersedes No.**	
Review Date		**Page No.**	3 of 3

SOP	:	Standard Operating procedure
No.	:	Number
MCB	:	Mixed Column Base.
PLC	:	Programmable Logic Controller.
UV	:	Ultra Violet.