

Analysis of limestone, water & instrument airLime-Stone**DESIGN LIMESTONE ANALYSIS**

Sl. No	Constituents	Unit	% by Weight	
			Analysis #1	Analysis #2
1.	Silica as SiO_2	%	7.5	4-6
2.	Iron as Fe_2O_3	%	8.0	1.5-2.2
3.	Aluminium as Al_2O_3	%	1.0	1.8-2.8
4.	CaCO_3	%	71.4	85-89
5.	MgCO_3	%	3.4	
6.	Acid Insoluble	%	7.0	Below 1%
7.	Others	%	1.02	-
8.	Inherent Moisture Content	%	Max 0.5	-
9.	Bond Work index	KWH/T	11.61	13

For design purpose, Bond Work Index of 13 KWH/Short Ton to be considered.

Process Water

S. No	Constituents	Unit	Water quality
1.	Total Cations as CaCO_3	ppm	645.9
2.	Total Anions as CaCO_3	ppm	645.9
3.	Calcium as CaCO_3	ppm	295.0
4.	Magnesium as CaCO_3	ppm	77.0
5.	Sodium and Potassium CaCO_3	ppm	272.9
6.	Iron as Fe	ppm	0.6
7.	Total Alkalinity as CaCO_3	ppm	487.7
8.	Chlorides as CaCO_3	ppm	149.0
9.	Sulphate as CaCO_3	ppm	31.7
10.	Silica Non colloidal as SiO_2	ppm	36
11.	pH		8.0-8.5
12.	Turbidity	NTU	<15

Cooling Water

Water Source: DM Water:

Supply Temp. At TP: 36°C .

Supply Pressure: 4-5 Kg/cm^2