

Analysis of limestone, water & instrument airLime-Stone

Absorbent Name	LIMESTONE
Grain Size	Medium
Bond Index	13kWh/ton

Type of Absorbent	<input checked="" type="checkbox"/> Rock <input type="checkbox"/> Powder <input type="checkbox"/> Slurry <input type="checkbox"/> Others :
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Feed Condition to Absorber	<input type="checkbox"/> Powder <input checked="" type="checkbox"/> Slurry 30 wt% <input type="checkbox"/> Others :
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Absorbent Composition		Limestone			Note	
		Design	Normal	Guarantee		
Dolomite(MgCa(CO ₃) ₂)		wt%-d	0	-	0	
	CaO	wt%-d	47-51.0 (*1)	-	51	
	MgO	wt%-d	0.9-3.8	-	-	
Inert	Cl ₂	wt%-d	<0.015	-	-	
	Al ₂ O ₃	wt%-d	1.19-2.1	-	-	
	Si ₂ O ₃	wt%-d	2.1-4.5	-	-	
	Fe ₂ O ₃	wt%-d	0.45-1.0	-	-	
	TiO ₂	wt%-d	<0.02	-	-	
	Na ₂ O	wt%-d	<0.16	-	-	
	K ₂ O	wt%-d	<0.01	-	-	
	P ₂ O ₅	wt%-d	Traces	-	-	
	LOI	wt%-d	39.0-41.3	-	-	
	Total Sulphur	wt%-d	<0.1	-	-	
	Mn ₂ O ₃	wt%-d	<0.12	-	-	
Density	kg/m ³		1400			For volume
	kg/m ³		1700			For torque, drive calculation and structural load calculation

N/D : Not detectable

(*1) Design condition limestone purity CaO 47%; Guarantee condition limestone purity CaO 51%

Process Water

		Clarified Water		
		Minimum	Normal	Maximum
Temperature at B.L.	deg.C	20	27	35
Pressure at B.L.	MPaG	-	-	-
pH	-	7.0	-	7.8
S.S.	mg/l	-	-	-
Composition				
	Ca ²⁺ ppm CO ₃ Ca	-	105	-
	Mg ²⁺ ppm CO ₃ Ca	-	81	-
	Na ⁺ ppm CO ₃ Ca	-	70	-
	K ⁺ ppm CO ₃ Ca	-	7	-
	Oil and Grease mg/l	-	-	-
	N ₂ H ₄ mg/l	-	-	-
	HCO ₃ ⁻ ppm CO ₃ Ca	-	180	-
	CO ₃ ²⁻ ppm CO ₃ Ca	-	-	-
	Cl ⁻ ppm CO ₃ Ca	-	60	-
	SO ₄ ²⁻ ppm CO ₃ Ca	-	23	-
	Slica mg/l	-	17	-
	To-NH ₄ mg/l	-	-	-
	Fe ²⁺ mg/l	-	0.5	-
	Cd mg/l	-	-	-
	NO ₃ ⁻ ppm CO ₃ Ca	-	-	-
	B mg/l	-	-	-
	To-Inorganic mg/l	-	-	-
	Cu microg/l	-	-	-
	Hg microg/l	-	-	-
	Pb microg/l	-	-	-
	NO ₂ ⁻ microg/l	-	-	-
	F ⁻ microg/l	-	-	-
	Cr ⁶⁺ microg/l	-	-	-
	Ni microg/l	-	-	-
	To-Zn microg/l	-	-	-
BOD	mg/l	-	8	-
COD	mg/l	-	14	-
P alkalinity	ppm CO ₃ Ca	-	-	-
M alkalinity	ppm CO ₃ Ca	-	180	-
Total Hardness	ppm CO ₃ Ca	-	186	-
Total Dissolved Solids	ppm	-	350 - 400	-
Turbidity	NTU	-	10	-
Conductivity	micro m/m	-	-	-

Cooling Water

Water Source		-					
		Available Value			Design Value		
		Minimum	Normal	Maximum	Minimum	Normal	Maximum
Supply Temp. at TP	deg.C	-	-	-	-	38 (*1)	-
Return Temp. at TP	deg.C	-	-	-	-	47	-
ΔT	deg.C	-	-	-	-	9	-
Supply Press. at TP	MPaG	-	-	-	-	0.6(*1)	-
Return Press. at TP	MPaG	-	-	-	-	0.3(*1)	-
Flow at TP	m ³ /hr	-	-	-	-	50(*1)	-

(*1) Assumed value

Instrument Air

Air Source		-					
Dew Point (atmospheric)	deg.C	≤ -40					
Oil Mist Contamination		<input type="checkbox"/> Contaminated <input checked="" type="checkbox"/> Not Contaminated					
		Available Value			Design Value		
		Minimum	Normal	Maximum	Minimum	Normal	Maximum
		Temperature at TP	deg.C	-	-	-	-
Pressure at TP	MPaG	-	-	-	0.55	-	0.8

(*1) In summer

Service Air

Air Source		-					
		Available Value			Design Value		
		Minimum	Normal	Maximum	Minimum	Normal	Maximum
		Temperature at TP	deg.C	-	-	-	-
Pressure at TP	MPaG	-	-	-	0.55	-	0.8

(*1) In summer