

JK LAKSHMI CEMENT LIMITED

DURG UNIT, CHHATTISGARH



Welcomes You

IBM Existing Threshold Value of Limestone Mineral for implementation

- In Chhattisgarh, Gujarat, Himachal Pradesh, Madhya Pradesh, Maharashtra ,Rajasthan, Uttrakhand & Uttar Pradesh
- CaO – >34% , &
- MgO- 4% (max.)

Threshold Value

- Limestone mineral threshold value of CaO is $> 34\%$, it's range is very broad, so no requirement of any change in CaO Radical.
- But the Limestone threshold value of MgO is 4% (Max.), which recurrently demand to increase to 5 - 5.5 % for making clinker for blended cement.

Existing MgO % requirement as per BIS specification for Clinker

- For Clinker, BIS specification of MgO is 6% (Maximum) for manufacturing of Ordinary Portland Cement (OPC) and blended Cement (Portland Pozzolana Cement, Portland Slag Cement & Composite Cement) .
- We can make separate clinker of MgO%= 8.0% (Max.) which can be used for making blended cement (PPC,PSC and COC) and also comply the requirement of Cement BIS specification for MgO% .

Existing MgO % requirement as per BIS specification for various type of Cement

BIS requirement for MgO% in blended Cement (PPC, PSC and Composite Cement) is more, compare to OPC Cement.

CHEMICAL PARAMETER	OPC (IS:269:2015)	PPC (IS :1489:2015)	PSC (IS 455:2015)	COMPOSITE (IS16415:2015)
MgO% (Max.)	6.0	6.0	10.0	8.0

The BIS specification for MgO% in clinker for manufacturing of various type of Blended Cement (PPC,PSC & COC) must be increased from 6% to 8% and for OPC should kept same as 6%.

Existing MgO % requirement as per BIS specification for various type of Cement

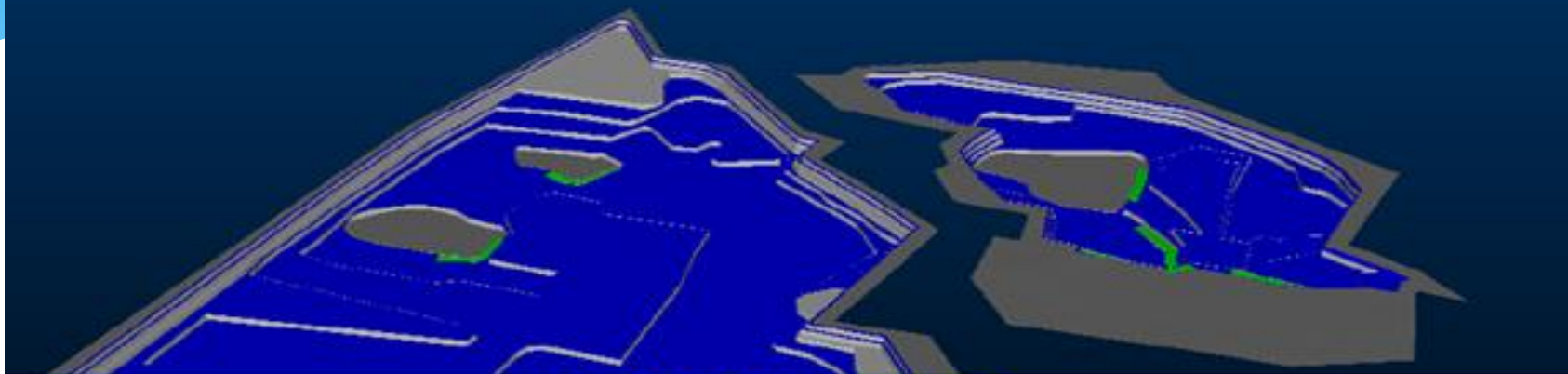
- If the MgO% in clinker is more than 6 % for manufacturing of blended cement the quality of Cement will not affect and also there will be no expansion in cement due to addition of siliceous material like fly ash and slag.
- At present scenario of cement market about 80-90% of blended cement is consumed by customers due to low cost and durable quality of cement.

Lab R & D Analysis

- During R&D we found that our Composite Cement comply the BIS specification for all Cement parameter .
- And the clinker used for making above cement fails due to MgO % in Clinker found more than 6% which exceed the existing BIS specification.

JK LAKSHMI CEMENT LIMESTONE MINE

Mining Lease-1 (267.695 Hect.)



GEOLOGICAL RESERVES

CATEGORY	DENSITY	TONNES (in Mill.)	CaO	MgO	SiO2	Al2O3	Fe2O3	NaO	K2O
ORE	2.5	135.92	42.18	3.4	11.93	3.24	1.61	0.2	0.66
SUBGRADE	2.5	11.93	39.94	6.11	11.84	3.2	1.64	0.22	0.66
SOIL	1.5	6.98							

Suggestion

- Threshold value of MgO% in limestone mineral must be increase from 4 to 5-5.5% (max) for making clinker for blending cement and for OPC clinker will remain un change (4.0% Max.).
- And the BIS specification of MgO in Clinker for making blended cement must be increased from 6 to 8% (Max.)
- So keeping in view of the above requirement ,the necessary changes in both IBM threshold value and also BIS specification for manufacturing Blended Cement must be changed as above.
- Thus, By increasing the MgO% in Limestone for making blended cement clinker we can conserve the minerals as well as Environment and also expand the life of mines which will generate more revenues and development for Country.

Advantages of increasing threshold value of magnesia

- * Limestone mineral conservation
- * Increase the life of mines
- * Lower the Rejection for high MgO% Limestone.
- * Save the cost of minerals.
- * Simplify the Mines operation as low rejection.
- * Help in conservation of Environment.

