

## 32 Dolomite

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**D**olomite ( $\text{CaCO}_3 \cdot \text{MgCO}_3$ ) theoretically contains  $\text{CaCO}_3$  54.35% and  $\text{MgCO}_3$  45.65% or  $\text{CaO}$  30.4%,  $\text{MgO}$  21.9% and  $\text{CO}_2$  47.7%. However, in nature, dolomite is not available in this exact proportion. Hence, in commercial parlance, the rock containing 40-45%  $\text{MgCO}_3$  is usually called dolomite. It is grouped under flux and construction minerals and is important for iron & steel and ferro-alloys industries.

### RESOURCES

Dolomite occurrences are widespread in almost all parts of the country. As per UNFC system, as on 1.4.2005 total resources of dolomite are placed at 7,533 million tonnes, out of which 985 million tonnes are placed under reserves category and the balance; i.e., 6,548 million tonnes under remaining resources category. Gradewise, BF/sintering grade accounts for 30% resources followed by SMS (20%), refractory (6%), BF & SMS mixed (4%) and glass (3%). Others, unclassified, not-known and BF, SMS & refractory mixed grades together account for the remaining 37%. Major share of about 90% resources was distributed in eight states: namely, Madhya Pradesh (26%), Andhra Pradesh (15%), Chhattisgarh and Odisha (11% each), Karnataka (8%), Gujarat and Rajasthan (7% each) and Maharashtra (5%). The remaining 10% resources are distributed in West Bengal, Uttarakhand, Uttar Pradesh, Arunachal Pradesh, Jharkhand, Haryana, Sikkim and Tamil Nadu. Gradewise and Statewise reserves/resources are given in Table-1.

### EXPLORATION & DEVELOPMENT

In 2009-10, DMG, Kanataka conducted exploration for limestone and dolomite in Tumkur district and Mysore Minerals Ltd in Naralakere,

Katagere and Katagiri dolomite mines in Bagalkote district, respectively. Details of exploration activities are furnished in Table- 2.

### PRODUCTION AND STOCKS

The production of dolomite in 2009-10 at 5.18 million tonnes decreased by 6% as compared to that in the previous year.

There were 107 reporting mines in 2009-10 as against 120 in the previous year. Besides, production of dolomite was reported by 44 associated mines in 2009-10 as against 45 in previous year. About 70% of total production was contributed by 12 principal producers. About 20% production of dolomite was also reported as an associated mineral primarily with limestone, steatite and clay (others). Six mines producing more than 2 lakh tonnes annually accounted for 59% of the total production in 2009-10.

The share of public sector in 2009-10 was 43% as against 48% in the previous year. Andhra Pradesh, the leading producing state of dolomite accounted for 30% of total production in 2009-10, followed by Chhattisgarh (23%), Odisha (18%), Jharkhand (8%) and Karnataka (7%). The remaining 14% was jointly shared by Gujarat, Madhya Pradesh, Maharashtra, Rajasthan and Uttarakhand (Tables- 3 to 6).

Mine-head stocks of dolomite at the end of the year 2009-10 was 1,752 thousand tonnes as against 1,676 thousand tonnes at the beginning of the year (Table-7).

The average daily employment of labour in 2009-10 was 2,300 as against 3,027 in the previous year. The prices of dolomite are furnished in the General Review on Prices.

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**Table – 1 : Reserves/Resources of Dolomite as on 1.4.2005  
(By Grades/States)**

(In '000 tonnes)

Grade/State	Reserves				Remaining resources						Total resources (A+B)		
	Proved STD111	Probable		Total (A)	Feasibility STD211	Pre-feasibility		Measured STD331	Indicated STD332	Inferred STD333		Reconnaissance STD334	
		STD121	STD122			STD221	STD222						
		STD101	STD102			STD201	STD202						
<b>All India : Total</b>	<b>407794</b>	<b>187077</b>	<b>390286</b>	<b>985156</b>	<b>11193</b>	<b>327152</b>	<b>152446</b>	<b>191266</b>	<b>392699</b>	<b>5356870</b>	<b>116327</b>	<b>6547952</b>	<b>7533108</b>
<b>By Grades</b>													
B.F./Sintering	139907	76548	156225	372680	-	177123	9706	59126	197676	1454860	20484	1918974	2291653
S.M.S.(O.H.)	30244	2563	17783	50590	5580	1299	12286	10136	44737	846620	63	920720	971310
S.M.S.(L.D.)	23553	16401	64057	104011	-	1643	7859	44307	644	67817	-	122270	226281
S.M.S. (O.H.& L.D. Mixed)	26928	36758	6034	69720	-	28550	2838	8360	4000	184625	-	228373	298093
B.F. & S.M.S. Mixed	56027	757	21464	78249	-	16400	24693	1000	27296	187804	-	257193	335442
Refractory	53334	15354	35353	104041	-	62442	24952	44700	-	195897	-	327992	432033
B.F., S.M.S. & Refractory	-	3259	2354	5614	-	-	1749	-	-	8659	-	10408	16022
Glass	6751	14477	8613	29841	5371	20513	37406	2093	1297	135773	-	202453	232294
Others	37005	20042	41490	98537	242	1748	2186	20259	46734	102169	-	173338	271876
Unclassified	23903	770	23590	48263	-	15850	10073	745	50991	596673	-	674332	722595
Not-known	10142	147	13322	23611	-	1583	18697	541	19326	1575972	95780	1711899	1735510
<b>By States</b>													
Andhra Pradesh	78933	8077	36411	123422	-	-	-	-	130654	892349	-	1023003	1146425
Arunachal Pradesh	-	-	-	-	-	-	-	-	204	77633	-	77837	77837
Chhattisgarh	52108	64526	27972	144606	242	190795	6499	19840	33670	449108	1950	702105	846711
Gujarat	28096	119	26085	54300	-	30716	62435	20263	63780	293000	-	470194	524494
Haryana	-	-	-	-	5371	5149	3722	-	-	15257	-	29500	29500
Jharkhand	21918	1897	9674	33489	-	-	-	-	-	17606	-	17606	51094
Karnataka	84865	35916	23929	144710	-	-	-	9360	17578	461377	484	488800	633509
Madhya Pradesh	36284	25644	54063	115990	5580	62704	42243	91178	37403	1506850	113830	1859788	1975779
Maharashtra	12907	2644	6889	22440	-	265	1915	-	17800	335654	-	355633	378074
Odisha	34821	18577	113845	167243	-	12733	985	43136	15496	596423	63	668836	836079
Rajasthan	57862	54	43417	101333	-	24069	34299	33	1772	338798	-	398970	500304
Sikkim	-	-	-	-	-	-	-	-	-	2756	-	2756	2756
Tamil Nadu	-	-	-	-	-	-	-	2010	135	-	-	2145	2145
Uttar Pradesh	-	17094	-	17094	-	-	-	3500	-	66230	-	69730	86824
Uttarakhand	-	-	-	-	-	721	349	1946	981	199553	-	203549	203549
West Bengal	-	12528	48000	60528	-	-	-	-	73226	104275	-	177501	238029

Figures rounded off.

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**Table – 2 : Details of Exploration Activities for Dolomite, 2009-10**

Agency State/ District	Location/ Area/ Block	Mapping		Drilling		Sampling (No.)	Remarks Reserves/Resources estimated
		Scale	Area (sq km)	No. of boreholes	Meterage		
<b>DMG</b>							
<b>Karnataka</b> Tukur	MelanaHalli	–	426	150	–	–	Deposit of limestone and dolomite occurs alternately as elongated linear bands. Estimation of resources will be taken after the completion of drilling.
<b>Mysore Minerals Ltd</b>							
<b>Karnataka</b> Bagalkot	Neralakere	1:2000	61.52	–	–	13	A total of about 16.98 million tonnes resources was estimated with an average grade of MgO-18.25% CaO-33% SiO <sub>2</sub> -1.75%.
	Katagri	1:2000	178.33	8	255	137	A total of about 24.44 million tonnes resources of dolomite was estimated with an average grade available in the area was CaO-32% MgO-19.5% and SiO <sub>2</sub> -1.75%.
	Kadapatti	1:1000	63.50	3	180	5	About 7.57 million tonnes resources of dolomite were estimated with an average grade of CaO-33% MgO-18.25% & SiO <sub>2</sub> -1.75%.

**Table – 3 : Principal producers of Dolomite 2009-10**

Name & address of producer	Location of mine	
	State	District
Steel Authority of India Ltd, Ispat Bhavan, P. B. No. 3049, Lodhi Road, New Delhi – 110 003.	Jharkhand Chhattisgarh	Garhwa Bilaspur
Rastriya Ispat Nigam Ltd, Visakhapatnam Steel Plant, Madharam Dolomite Mine, Madharam -507 122, Dist. Khammam, Andhra Pradesh.	Andhra Pradesh	Khammam
South West Mining Ltd, P.O. - Vidyanagar, Dist. - Bellary, Karnataka.	Andhra Pradesh	Khammam
Tata Steel Ltd, Ferro Alloys & Mineral Division, Gomardihi Dolomite Quarry, Bombay House, 24, Homi Modi Steel, Mumbai - 400 001.		
*Bisra Stone Lime Co. Ltd, P.O. Birmitrapur, Dist. Sundargarh, Odisha.	Odisha	Sundargarh
Dolomite Mining Corpn, Khamaria Shakti Road, Dist. Janjgir-Champa, Chhattisgarh.	Chhattisgarh	Janjgir- Champa

(Contd.)

Table - 3 (Concltd.)

Name & address of producer	Location of mine	
	State	District
N. S. Saigal, Associated Mining Co., Nanak House, H-2/133, Narmada Nagar, Bilaspur, Chhattisgarh.	Chhattisgarh	Bilaspur
A. Sekhar Reddy, 20-1-2, Kondepeta, Dhona Mandal, Dist. Kurnool-518 222, Andhra Pradesh.	Andhra Pradesh	Kurnool
# Khetan Business Corporation Pvt. Ltd, Old Bus Stand, Nathdwara, Rajasthan.	Rajasthan	Rajsamand
Sangameshwar Mines & Minerals, Bagalkot- 587 101, Dist. Bagalkot, Karnataka.	Karnataka	Bagalkot
Mysore Minerals Ltd, 39-M.G. Road, Bangalore-560 001, Karnataka.	Karnataka	Bagalkot
Dadigam, D.G. Rathwa, Dist. Vadodara – 391 165, Gujarat.	Gujarat	Vadodara

\*Associated mine with limestone.  
# Associated with steatite.

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**Table – 5 : Production of Dolomite, 2008-09 & 2009-10**  
(By Sectors/States/Districts)

(Qty. in tonnes; value in Rs.'000)

State/District	2008-09			2009-10 (P)		
	No. of mines	Quantity	Value	No. of mines	Quantity	Value
<b>India</b>	<b>120(45)</b>	<b>5504093</b>	<b>1554124</b>	<b>107(44)</b>	<b>5182284</b>	<b>1447900</b>
Public sector	6(1)	2668326	1011647	6(1)	2249942	911678
Private sector	114(44)	2835767	542477	101(43)	2932342	536222
<b>Andhra Pradesh</b>	<b>13(12)</b>	<b>1251958</b>	<b>277441</b>	<b>13 (13)</b>	<b>1538762</b>	<b>334380</b>
Anantapur	3 (4)	50349	6941	4 (3)	57635	8060
Cuddapah/(YSR district)	1	600	60	1	1900	178
Khammam	1	526754	172249	1	600642	196410
Kurnool	8(8)	674255	98191	7 (10)	878585	129732
<b>Chhattisgarh</b>	<b>23</b>	<b>1317858</b>	<b>361156</b>	<b>21</b>	<b>1206950</b>	<b>315882</b>
Bilaspur	14	1222191	346285	12	1062211	299690
Durg	7	49277	6237	7	18299	1857
Janjgir-Champa	2	46390	8634	2	126440	14335
<b>Gujarat</b>	<b>15</b>	<b>169447</b>	<b>22962</b>	<b>12</b>	<b>250847</b>	<b>30783</b>
Vadodara	15	169447	22962	12	250847	30783
<b>Jharkhand</b>	<b>1</b>	<b>301341</b>	<b>271207</b>	<b>1</b>	<b>422016</b>	<b>354787</b>
Garwah	1	301341	271207	1	422016	354787
<b>Karnataka</b>	<b>16(7)</b>	<b>354015</b>	<b>52262</b>	<b>15(6)</b>	<b>370201</b>	<b>54710</b>
Bagalkot	13(4)	282891	40579	12(4)	317849	47505
Belgaum	3(1)	64980	10319	3 (1)	49182	6462
Tumkur	(2)	6144	1364	(1)	3170	743
<b>Madhya Pradesh</b>	<b>42(3)</b>	<b>199377</b>	<b>25986</b>	<b>36(4)</b>	<b>198044</b>	<b>24757</b>
Balaghat	5	7278	890	4	8504	926
Chhindwara	1	148	20	1	191	22
Jabalpur	4(1)	16304	1731	4(1)	24065	2638
Jhabua	10	35757	4465	5	16728	1687
Katni	3(2)	18629	1998	3(3)	9980	818
Khargone (West Nimar)	1	13550	2371	1	13550	2371
Mandla	13	96951	13077	14	107895	14113
Seoni	5	10760	1434	4	17131	2182
<b>Maharashtra</b>	<b>5(4)</b>	<b>94896</b>	<b>16849</b>	<b>5(3)</b>	<b>80340</b>	<b>14090</b>
Chandrapur	1	320	41	1	123	16
Nagpur	3(2)	21341	5935	4	11620	2482
Yavatmal	1(2)	73235	10873	(3)	68597	11592
<b>Odisha</b>	<b>5(7)</b>	<b>1614131</b>	<b>501922</b>	<b>4(7)</b>	<b>943015</b>	<b>296603</b>
Sundergarh	5(7)	1614131	501922	4(7)	943015	29660
<b>Rajasthan</b>	<b>(10)</b>	<b>147123</b>	<b>19807</b>	<b>(10)</b>	<b>170162</b>	<b>21723</b>
Rajsamand	(5)	123555	15865	(5)	108541	13718
Sikar	(1)	232	22	(1)	232	23
Udaipur	(4)	23336	3920	(4)	61389	7982
<b>Uttarakhand</b>	<b>(2)</b>	<b>53947</b>	<b>4532</b>	<b>(1)</b>	<b>1947</b>	<b>185</b>
Bageshwar	(1)	53875	4525	–	–	–
Pithoragarh	(1)	72	7	(1)	1947	185

Figures in parentheses indicate number of associated mines with steatite, limestone and clay (others).

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**Table – 4 : Production of Dolomite, 2007-08 to 2009-10  
(By States)**

(Qty in tonnes; value in Rs.'000)

State	2007-08		2008-09		2009-10 (P)	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>India</b>	<b>5852296</b>	<b>1461207</b>	<b>5504093</b>	<b>1554124</b>	<b>5182284</b>	<b>1447900</b>
Andhra Pradesh	1400493	292702	1251958	277441	1538762	334380
Chhattisgarh	1295411	294381	1317858	361156	1206950	315882
Gujarat	111233	14877	169447	22962	250847	30783
Jharkhand	307826	237886	301341	271207	422016	354787
Karnataka	350926	48232	354015	52262	370201	54710
Madhya Pradesh	192100	24233	199377	25986	198044	24757
Maharashtra	67370	10755	94896	16849	80340	14090
Odisha	1876181	496694	1614131	501922	943015	296603
Rajasthan	214831	38429	147123	19807	170162	21723
Uttarakhand	35925	3018	53947	4532	1947	185

**Table – 6 : Production of Dolomite, 2008-09 & 2009-10 (P)  
(By Frequency Group)**

(Qty in tonnes)

Production Group	Number of mines		Production for the group		Percentage in total production		Cumulative Percentage	
	2008-09	2009-10	2008-09	2009-10	2008-09	2009-10	2008-09	2009-10
<b>All Groups</b>	<b>120(45)</b>	<b>107(44)</b>	<b>5504093</b>	<b>5182284</b>	<b>100.0</b>	<b>100.0</b>	–	–
Up to 1000	20(6)	25(7)	14138	12315	0.26	0.24	0.26	0.24
1001-5000	33(12)	31(10)	118691	102648	2.16	1.98	2.42	2.22
5001-10000	18 (10)	2(9)	201994	76723	3.66	1.48	6.08	3.70
10001-50000	38(13)	35(15)	1158582	1121436	21.05	21.64	27.13	25.34
50001-200000	7(2)	10(1)	650079	802349	11.81	15.48	38.94	40.82
Above-200000	4 (2)	4 (2)	3360609	3066813	61.06	59.18	100	100.0

Figures in parentheses indicate number of associated mines with steatite, limestone and clay (others).

**Table – 7 : Mine-head Stocks of Dolomite  
2009-10 (P)  
(By States)**

(In tonnes)

State	At the beginning of the year	At the end of the year
<b>India</b>	<b>1675848</b>	<b>1752490</b>
Andhra Pradesh	186121	355613
Chhattisgarh	222626	71709
Gujarat	9568	14688
Jharkhand	24204	26402
Karnataka	128814	190618
Madhya Pradesh	92674	92963
Maharashtra	36096	46593
Odisha	876460	840607
Rajasthan	99285	113297

in vogue in most mines. However, a few mines are semi-mechanised.

Steel plants draw major supplies of dolomite for use as a flux and also as a refractory material. The requirement of low silica dolomite is increasing in steel plants at Bhilai, Rourkela, Visakhapatnam and Jamshedpur. However, the supply of such materials from indigenous sources is posing a problem. Therefore, Bokaro, Rourkela, Durgapur and Jamshedpur steel plants are drawing supplies of low silica dolomite from Bhutan for use in tar-bonded refractory bricks required for lining of LD furnaces and also for fluxing purposes.

Bhilai, Bokaro, Rourkela, Jamshedpur, Visakhapatnam and Bhadravati steel plants have captive mines. Besides, these plants draw supplies from private parties. Dolomite produced from Tulsidamar mine in Garhwa district, Jharkhand, is used mainly by Bokaro Steel Plant.

## MINING AND MARKETING

Dolomite mines are generally worked by opencast method of mining. Manual working is

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Dolomite produced in Tumkur district of Karnataka is supplied to the ferro-manganese plants at Dandeli, Uttar Kannad district. The VISP's steel plant at Bhadravati receives its supplies from Nerelekere mine in Bagalkot, Karnataka.

Dolomite of Baradwar and Hirri areas in Chhattisgarh is supplied to the steel plants at Bhilai, Bokaro and Rourkela besides foundry and glass manufacturing units. Birmitrapur, Panposh and Gomardih areas of Sundergarh district, Odisha, supplied dolomite to iron and steel plants at Durgapur, Rourkela, Burnpur and Jamshedpur. Dolomite from this region is also used by the ferro-manganese plants at Joda and Rayagada in Odisha. Low-silica dolomite from Jayanti area in Jalpaiguri district of West Bengal is supplied mainly to steel plants at Durgapur and Jamshedpur.

In Odisha and Rajasthan dolomite is supplied to the foundry and grinding units. The production from Vadodara district, Gujarat, is used for making chips and tiles. In Gujarat and Maharashtra, dolomite is used for making potteries and in ferro-alloys industry.

Dolomite produced in Jhabua district, Madhya Pradesh, is utilised by fertilizer, tile-making and grinding units. Dolomite of Jabalpur and Mandla districts is supplied to chips manufacturing units at Katni and Bhilai, respectively.

## USES

Dolomite after calcination is used for refractory purposes (as a substitute of magnesite refractories) in linings of furnaces like basic open-hearth steel furnaces and basic Bessemer converters. Like limestone, dolomite is used as a flux in iron, steel, ferro-alloys and glass works and for the production of carbon dioxide (required for the manufacture of beverages). It is useful in the recovery of magnesia and also in the manufacture of magnesium metal; for the manufacture of basic magnesium carbonate (termed 'technical carbonate'), 'block magnesia' or 'magnesia alba' used in pipe and boiler coverings and for other heat insulation, in pharmaceutical, rubber and chemical industries, and in the manufacture of paper, leather, glass, potteries and high-magnesium limes. In agriculture, it is used as a soil conditioner to correct acidity. It finds use as a filler in fertilizers, paints & varnishes, in coal mines (to prevent dust explosions), and also as a building stone.

## SPECIFICATIONS

Generally, insolubles like  $\text{SiO}_2$ ,  $\text{Fe}_2\text{O}_3$  and  $\text{Al}_2\text{O}_3$  are considered deleterious constituents of dolomite for any industrial use. It is essential that these insolubles should be as low as possible. High purity dolomite with less than one percent insolubles is preferred for making refractory bricks which are used in the lining of LD furnaces.

Similarly, high-grade dolomite containing as low iron as possible (less than 0.15%) is required in glass industry. The IS specifications of dolomite for use in glass industry are given in Table-8. The general specifications of dolomite consumed in different steel plants are given in Table-9. Specifications for dolomite for use in iron & steel industry have been revised and are prescribed in IS : 10346 - 1991 (reaffirmed 2003).

## CONSUMPTION

Dolomite is consumed by iron & steel, ferro-alloys, fertilizer, glass, alloy steel and other industries. The total consumption of dolomite in 2009-10 was 6.09 million tonnes. It increased by 9% from that in the year 2008-09, mainly in sponge iron industry. Iron & steel industry was the major consumer of dolomite in 2009-10 accounting 77%, followed by sponge iron (16%) and cement & ferro-alloys (2% each). The remaining quantity was utilised by other industries, such as alloy steel, glass, fertilizer, paint, refractory, etc. (Table - 10).

**Table – 8 : Specifications of Limestone and Dolomite for Glass Industry (IS : 997-1973; First Revision; Reaffirmed 1998)**

Constituent	Requirement on dry basis (percent)
Lime (as CaO)	53.00 (min)*
Total lime and magnesia (as CaO + MgO)	54.50 (min)
Silica (as $\text{SiO}_2$ )	2.50 (max)
Total iron (as $\text{Fe}_2\text{O}_3$ )	
(a) Calcite or marble	0.05 (max)
(b) Limestone	0.10 (max)
(c) Dolomitic limestone and dolomite	0.15 (max)

*\*In case of dolomitic limestone and dolomite, requirement of lime as CaO may be fixed by mutual agreement between the purchaser and supplier.*

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**Table – 9 : General Specifications of Dolomite Consumed in Different Steel Plants**

(In percent)

Plant	Constituent	SP/BF	SMS	Refractory
Bhilai Steel Plant	MgO	19 (min)	19 (min)	19 (min)
	CaO	29 (min)	29 (min)	29 (min)
	SiO <sub>2</sub>	4 (max)	3.5 (max)	3.5 (max)
	Size	10-60 mm	10 to 30 mm	30-60 mm
Bokaro Steel Plant	MgO	1.65-22.0	–	–
	CaO	23.2-34.8	–	–
	SiO <sub>2</sub>	1.0-20.0	–	–
	Size	25-75 mm	30-50 mm	5 to 25 mm
Rourkela Steel Plant	MgO	19 (min)	20 (min)	21 (min)
	CaO	–	–	–
	SiO <sub>2</sub>	–	2.5 (max)	1.5 (max)
	Al <sub>2</sub> O <sub>3</sub>	–	1.5 (max)	0.75 (max)
	Fe <sub>2</sub> O <sub>3</sub>	–	1.0 (max)	1.0 (max)
	AI	8 (max)	–	–
	Size	up to 6 mm	40 to 80 mm	–
Durgapur Steel Plant	MgO	19.5 (min)	20 (min)	–
	CaO	–	30-35	–
	SiO <sub>2</sub>	6 (max)	1.5 (max)	–
	Al <sub>2</sub> O <sub>3</sub>	–	0.8 (max)	–
	Fe <sub>2</sub> O <sub>3</sub>	–	1.0 (max)	–
	AI	10 (max)	–	–
	LOI	–	44.0	–
Size	15-50 mm	30-60 mm	–	
IISCO Steel Plant	MgO	19.5 (min)	20.0 (min)	–
	SiO <sub>2</sub>	–	1.5 (max)	–
	Size	25 to 75 mm	3 to 20 mm	–
Tata Steel Ltd	MgO	20 (min)	20 (min)	20 (min)
	SiO <sub>2</sub>	–	3.45	1.7 (max)
	AI	6 (max)	6 (max)	1.5 (max)
	Size	20 to 75 mm	25 to 50 mm	5 to 25 mm
Visvesvaraya Iron & Steel Plant	MgO	–	21-22	–
	CaO	–	30-31	–
	SiO <sub>2</sub>	–	1-1.70	–
	Size	–	10 to 50 mm	–
Visakhapatnam Steel Plant	MgO	18.0 (min)	21.0 (min)	–
	CaO	28.0 (min)	30.0 (min)	–
	SiO <sub>2</sub>	4.0 (max)	1.0 (max)	–
	LOI	44.95	46.00	–
	Size	6 to 80 mm	25-50 mm & 5 to 25 mm	–
JSW Steel Ltd	CaO + MgO	–	>45	–
	MgO	–	>19	–
IDCOL, Kalinga Iron Works	MgO	19.50 (min)	–	–
	AI	8.00 (max)	–	–
	Size	25-75 mm	–	–
Kirkoskar Ferrous Industries Ltd	MgO	19 (min)	–	–
	CaO	28 (min)	–	–
	SiO <sub>2</sub>	3 (max)	–	–
	Al <sub>2</sub> O <sub>3</sub>	1 (max)	–	–
	P	0.05 (max)	–	–
	Size	10 to 40 mm	–	–
Visa Steel Ltd	CaO	28% (min)	–	–
	Size	4-8 mm	–	–
		10-50 mm	–	–
KIOCL Ltd	MgO	19.0 (min)	–	–
	CaO	29.0 (min)	–	–
	SiO <sub>2</sub>	3.5 (max)	–	–
	LOI	43.0 (min)	–	–
	Size	10-40 mm	–	–
Neelachal Ispat Nigam Ltd	MgO	19.5 (min)	–	–
	Size	Up to 60 mm	–	–

*Note: SP: Sinter plant; BF: Blast furnace; SMS: Steel melting shop; AI: Acid insolubles*

DOLOMITE

**Table –10 : Reported Consumption of Dolomite  
2007-08 to 2009-10  
(By Industries)**

Industry	(In tonnes)		
	2007-08(R)	2008-09(R)	2009-10(P)
<b>All Industries</b>	<b>5694000</b>	<b>5585100</b>	<b>6085300</b>
Alloy steel	19900(5)	19900(5)	19900(5)
Cement	73200(4)	102300(4)	105200(4)
Ceramic	10500(5)	9700(5)	17800(6)
Ferro-alloys	92700(14)	104400(23)	97700(23)
Fertilizer	11100(4)	9500(4)	12100(4)
Foundry	1900(5)	1300(5)	1900(5)
Glass	76400(28)	81900(29)	82800(29)
Iron & steel 1/	4548600(22)	4798500(26)	4674700(25)
Paint	19700(12)	27700(12)	27700(12)
Refractory	63400(2)	63400(2)	63400(2)
Sponge iron	776000(18)	335900(28)	981500(28)
Others (Chemical, electrical, electrode and rubber)	600(6)	600(6)	600(6)

*Figures rounded off. Data collected on non-statutory basis. Figures in parentheses denote the number of units in organised sector reporting\* consumption.*

*(\*Includes actual reported consumption and/or estimates made wherever required).*

*1/ The figures for iron & steel and pelletisation (iron & steel) added.*

## FOREIGN TRADE

### Exports

Exports of dolomite declined nominally to 18,707 tonnes in 2009-10 from 18,892 tonnes in 2008-09. Exports were mainly to Nepal (57%), Bangladesh (16%) and Bhutan (13%) in 2009-10 (Table - 11).

### Imports

Imports of dolomite increased to 450,979 tonnes in 2009-10 from 10,119 tonnes in 2008-09. Imports were mainly from Thailand (66%) and Egypt (25%) (Table - 12).

**Table – 11 : Exports of Dolomite  
(By Countries)**

Country	2008-09		2009-10	
	Qty (t)	Value (Rs. '000)	Qty (t)	Value (Rs. '000)
<b>All Countries</b>	<b>18892</b>	<b>48338</b>	<b>18707</b>	<b>46616</b>
Nepal	9485	12015	10679	20934
Bhutan	–	–	2526	7007
Bangladesh	3596	6573	3017	5432
Djibouti	406	1572	544	3194
Malaysia	465	2580	514	3100
UAE	432	2318	420	2777
Oman	553	2578	432	2070
Uganda	266	2219	99	523
Nigeria	353	1912	102	147
Saudi Arabia	1410	8069	–	–
Other countries	1926	8502	374	1432

**Table – 12 : Imports of Dolomite  
(By Countries)**

Country	2008-09		2009-10	
	Qty (t)	Value (Rs. '000)	Qty (t)	Value (Rs. '000)
<b>All Countries</b>	<b>10119</b>	<b>111105</b>	<b>450979</b>	<b>991241</b>
Thailand	–	–	295922	652553
Egypt	–	–	111916	166349
Italy	1725	33550	5235	118115
Philippines	–	–	24150	31861
Greece	508	5704	635	9225
China	3041	12832	10232	4868
UK	79	994	318	3381
Turkey	3346	41644	2320	2641
Austria	737	8003	–	–
UAE	578	7492	–	–
Other countries	105	886	251	2248

## FUTURE OUTLOOK

The resources of the refractory grade dolomite in the country are meagre and this type of material is in short supply but very much required for making tar-bonded dolomite bricks. Therefore, intensive search is needed in non-Himalayan regions for locating deposits of massive non-crystalline dolomite, containing less than 2.5% R<sub>2</sub>O<sub>3</sub> for use in tar-dolomite bricks required for lining of LD steel furnaces.