Indian Minerals Yearbook 2017

(Part- III : Mineral Reviews)

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MINOR MINERALS

30.18 OTHER CALCAREOUS MATERIALS

(FINAL RELEASE)

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30-18 Other Calcareous Materials

Other calcareous material used by industry is 'chalk', a white, extremely fine-grained, usually soft and friable variety of limestone, composed largely of microscopic small remains of foraminifera and broken shelly fragments; 'kankar', irregular nodules and concretions of impure calcium carbonate of all sizes found in the older surface alluvium or soils; and 'limeshell', the thick calcareous shells of molluscs deposited in the form of beds as well as present in ancient lakes and shallow seas. A limestone rock which separates well along the stratification into a few centimetres thick slab is termed 'flagstone'. The dimensional limestone is used for building and ornamental stone.

The total resources of chalk of all categories and grades as per NMI data based on UNFC system as on 1.4.2015 have been estimated in Gujarat at 6.75 million tonnes of which 5.06 million tonnes (75%) are under Reserves category and 1.69 million tonnes (25%) are under Remaining Resources category (Table-1).

Limekankar

As per Govt. of India Notification S.O.423 (E) dated 10th February 2015, 'limekankar' has been declared as 'Minor Mineral'. Hence, the production data is not available with IBM.

Chalk

As per Govt. of India Notification S.O.423 (E) dated 10th February 2015, 'chalk' has been declared as 'Minor Mineral'. Hence,the production data is not available with IBM.

FORMATION AND USES

Chalk

This soft, friable, porous sedimentary carbonate rock is a form of limestone composed mainly of calcite. It forms under reasonably deep marine conditions from the gradual accumulation of minute shells shed by micro-organisms. Chalk deposits are sedimentary types and it has greater resistance to weathering and slumping than the clays with which it is usually associated, thus forming steep cliffs where the chalk ridges meet the sea. Its well jointed nature holds large volume of ground water making it a natural reservoir. Chalk is mined from both above and underground.

Chalk is a common name given to black board chalk used for writing on the black board because of its property of crumble and easy to erase. Now-a-days many substitutes have replaced the natural chalk. Apart from this primary use, it is extensivly used as a filler as builder's putty. It is also used to increase pH of acidic soils, in small doses as antacid, as mild abrasive in toothpastes and polishing of metals and also as a fingerprint powder.

Kankar

Kankar is a nodular variety of limestone which is of spongy nature, found in almost all parts of India containing some quantity of clayey and silicious matter. It is found either in layers or blocks, or in separate nodules. The block form occurs as solid deposits at various depths, and the nodular variety is generally found scattered on the surface or in small thicknesses about a metre or so below the surface in the low lying portions of the catchments of nallas and rivulets. The nodules are of varying sizes from 10 mm to 100 mm. Nodular kankar is superior to block kankar but is not available in large quantities. Shining or glittering particles in a fresh fracture indicate presence of sand. The proportions of clay and sand can be determined by dissolving the sample in powdered form in dilute hydrochloric acid and determining the residue left. “Bichwa” kankar as known in the Punjab and U.P. in India is considered to be the best.

Kankar is extensively used for producing hydraulic lime. The nodules should have a blue grey fracture, free of any sand grains or mud sticking to them, and broken to pass a 12 mm gauge before being calcined.

Table – 1: Reserves/Resources of Chalk as on 01.04.2015
(By Grades/States)

(In'000 tonnes)

Grade/State	Reserves				Remaining Resources								Total Resources (A+B)
	Proved	Probable		Total	Feasibility	Pre-feasibility		Measured	Indicated	Inferred	Reconnaissance	Total	
	STD111	STD121	STD122	(A)	STD211	STD221	STD222	STD331	STD332	STD333	STD334	(B)	
All India : Total	**4215**	**529**	**319**	**5064**	**741**	**331**	**151**	**196**	**-**	**269**	**-**	**1687**	**6751**
By State													
Gujarat	4215	529	319	5064	741	331	151	196	-	269	-	1687	6751

Figures rounded off