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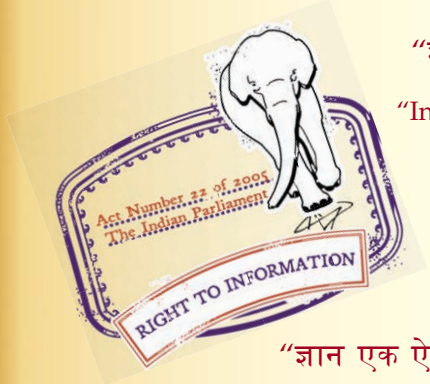

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SPECIFICATION FOR SANDSTONE (SLABS AND TILES)

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SPECIFICATION FOR SANDSTONE (SLABS AND TILES)

(First Revision)

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Indian Standard

SPECIFICATION FOR SANDSTONE (SLABS AND TILES)

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 30 November 1977, after the draft finalized by the Stones Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 Sandstone is extensively found in Assam, West Bengal, Madhya Pradesh, Jammu & Kashmir, Karnataka, Rajasthan, Tamil Nadu and in many other parts of the country and is used in floor construction, floor finish, facing, roofing, etc. Sandstones of certain minimum requirements of strength, compactness, etc, are suitable and therefore careful selection is necessary before use. This standard is formulated to provide guidance with respect to quality and dimensions of sandstone slabs.

0.3 This standard was first published in 1966. The revision has been prepared so as to update its provisions in light of the experience gained in the past 11 years.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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1. SCOPE

1.1 This standard lays down the requirements for dimensions and physical properties of sandstone slabs and tiles for use in flooring, roofing and face work.

2. GENERAL REQUIREMENTS

2.1 The stone shall be without any soft veins, cracks and flaws and shall have a uniform texture and colour.

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*Rules for rounding off numerical values (*revised*).

2.2 The deviation of surface from straightness shall not exceed 5 mm for slabs and 1 mm for tiles.

3. DIMENSIONS

3.1 Rough Cut — Sandstone slabs and tiles of rough cut edges shall be of sizes as specified below:

Length	*Breadth*	*Thickness*
15 to 360 cm in stages of 5 cm	15 to 90 cm in stages of 5 cm	15 to 100 mm in stages of 5 mm

NOTE — The sizes in between (of length and breadth) shall be reckoned as next lower size. This aspect will also cover tolerance in length and breadth.

3.1.1 *Tolerances* — The tolerance for thickness shall be $\pm$ 3 mm.

3.2 Machine Cut Slabs — Machine cut slabs with true and square edges shall be to the sizes mentioned in **3.1**. The tolerance in length and breadth shall be $\pm$ 1 mm and of thickness shall be $\pm$ 3 mm.

4. PHYSICAL PROPERTIES

4.1 The physical properties of sandstone slabs shall conform to the requirements given in col 3 of Table 1, when tested in accordance with the provisions of the appropriate Indian Standards given in col 4.

TABLE 1 PHYSICAL PROPERTIES OF SANDSTONE SLABS

SL No.	CHARACTERISTIC	REQUIREMENT	METHODS OF TEST (REFERENCE TO INDIAN STANDARD)
(1)	(2)	(3)	(4)
i)	Water absorption	Not more than 2·5 percent by mass	IS : 1124-1974*
ii)	Transverse strength	Not less than 7 N/mm² (70 kgf/cm²)	IS : 1121 (Part II)-1974†
iii)	Resistance to wear	Not greater than 2 mm on the average and 2·5 mm for any individual specimen	IS : 1706-1972‡
iv)	Durability	Shall not develop signs of spalling, disintegration or cracks	IS : 1126-1974§

*Method of test for determination of water absorption apparent specific gravity and porosity of natural building stones (*first revision*).

†Method of test for determination of strength properties of natural building stones: Part II Transverse strength.

‡Method for determination of resistance to wear by abrasion of natural building stones (*first revision*).

§Method of test for determination of durability of natural building stones (*first revision*).

5. MARKING

5.1 Each type of sandstone slabs and tiles may be marked in a suitable manner with the manufacturer's identification mark or initials.

6. SAMPLING AND CRITERIA FOR CONFORMITY

6.1 Lot — In any consignment all the slabs/tiles of the same quarry shall be grouped together to constitute a lot.

6.1.1 Samples shall be selected and tested separately for each lot for determining its conformity or otherwise to the requirements of this specification.

6.2 The number of slabs/tiles to be selected for the sample shall depend upon the size of the lot and shall be in accordance with Table 2.

6.2.1 The slabs/tiles in the sample shall be selected at random and in order to ensure the randomness of selection, random number table may be used (*see* IS : 4905-1968*).

TABLE 2 SAMPLE SIZE AND CRITERIA FOR CONFORMITY

(*Clauses* 6.2, 6.3 *and* 6.4)

Number of Slabs/ Tiles in the Lot	Number of Slabs/ Tiles to be Selected in Sample	Permissible Number of Defectives	Sub-sample Size in Numbers
(1)	(2)	(3)	(4)
Up to 100	5	0	3
101 to 300	8	0	3
301 „ 500	13	0	6
501 „ 1 000	20	1	6

6.3 All the slabs/tiles selected according to col 2 of Table 2 shall be examined for general requirements and dimensions (*see* **2** and **3**). Any slab/tile failing in any one or more of the above requirements shall be considered as defective. A lot shall be considered as conforming to these requirements if the number of defectives obtained is not more than the permissible number of defectives given in col 3 of Table 2.

6.4 The lot having been found satisfactory with respect to general requirements and dimensions shall be tested for physical properties. For this purpose a sub-sample of size given in col 4 of Table 2 shall be selected at random. These slabs/tiles in the sub-sample shall be first tested for transverse strength, the same samples after completion of this test shall be utilized for determining water absorption, durability and abrasion (*see* **4**). A lot shall be considered having been satisfied the requirement of the physical properties if none of the slabs/tiles tested for these requirements fails in any of these test.

*Methods for random sampling.

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