IS : 7779 (Part II/Sec 2) - 1979

(Reaffirmed 1998)

Indian Standard

SCHEDULE OF PROPERTIES AND AVAILABILITY OF STONES FOR CONSTRUCTION PURPOSES

PART II MAHARASHTRA STATE

Section 2 Engineering Properties of Building Stones

UDC 691·21 : 553·5 (083) (547·1)

INDIAN STANDARDS INSTITUTION
MANAK BHAYAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Price Rs 7·00

Gr 4

September 1979

Indian Standard

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Indian Standard

SCHEDULE OF PROPERTIES AND AVAILABILITY OF STONES FOR CONSTRUCTION PURPOSES

PART II MAHARASHTRA STATE

Section 2 Engineering Properties of Building Stones

0. FOREWORD

0.1 This Indian Standard (Part II/Section 2) was adopted by the Indian Standards Institution on 30 January 1979, after the draft finalized by the Stones Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 Stones are available in large quantities in different parts of the country. To choose and utilize them for various uses, it is necessary to know their availability as well as their various physical properties. Accordingly this Indian Standard is formulated to cover these informations. It is hoped that with the publication of this standard it will be convenient for the users to know the location of the various types of stones, and it will also act as a guide for their proper selection depending upon their particular use. This standard will give a general information for prospective builders who use stone and stone aggregates. The final acceptance of these materials in any work, would, however, be subject to the physical standards and other specification and quality control requirements stipulated for individual works.

0.2.1 This standard will be published in parts, each part covering a State. For facility in compilation and use of the standard, each part is divided in three sections. Accordingly Part II covers Maharashtra State and is being issued in three sections. Section 1 gives information on the availability of stones in the form of a map showing geological classification and location of known stone quarries; Section 2 covers engineering properties of building stones; and Section 3 covers engineering properties of stone aggregates.

0.3 The information contained in this section is based on the data provided by Engineering Research Institute, Maharashtra State and covers data collected up to the end of 1978. Further information, as and when received, will be added as addendum to this standard.

0.4 In reporting the results of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS : 2-1960*.

1. SCOPE

1.1 This Standard (Part II/Section 2) covers engineering properties of building stones of Maharashtra State.

2. TEST RESULTS

2.1 The test results of building stones tested for some of the important properties according to relevant Indian Standards are given in Table 1.

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

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974‡)	Porosity, Percent (IS :1124-1974‡)	Water Absorption, Percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1121-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability, Percent Loss (IS : 1126-1974‖)	Change in Absorption, Percent	Change in Volume, Percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1.	**Ahmednagar**														
	Bhandardara Dam Dn. Spillway Quarry	Compact basalt	Aphanitic	Greyish black	2·70	—	—	1·59	868·00	—	—	—	—	—	—
	do	do	do	do	2·70	—	—	1·60	715·00	—	—	—	—	—	—
	Bhandardara Dam Dn. Foundation of Buttress	do	do	do	2·80	—	—	1·40	1014·00	—	—	—	—	—	—
	do	Zeolitic basalt	Amygdaloidal	do	2·70	—	—	2·00	675·00	—	—	—	—	—	—
	do	do	do	do	2·60	—	—	2·40	634·00	—	—	—	—	—	—
	do	do	do	do	—	—	—	2·8	—	—	—	—	—	—	—
	do	do	do	do	—	—	—	2·00	—	—	—	—	—	—	—
	do	do	do	do	—	—	—	2·40	—	—	—	—	—	—	—
	do	Compact basalt	Aphanitic	do	—	—	—	1·40	—	—	—	—	—	—	—
	do	Zeolitic basalt	Amygdaloidal	do	—	—	—	3·00	—	—	—	—	—	—	—
	do	Compact basalt	Aphanitic	do	—	—	—	2·30	—	—	—	—	—	—	—
	Bhandardara Dam Foundation of Buttress	Zeolitic basalt	Amygdaloidal	do	2·66	—	—	2·80	553·00	—	—	—	—	—	—
	Bhandardara Dam Quarry Near Buttress	do	do	do	2·78	—	—	2·13	453·00	—	—	—	—	—	—
	do	do	do	do	2·64	—	—	3·16	478·00	—	—	—	—	—	—
	Bhandardara Dam Dn.	do	do	do	2·60	—	—	3·00	535·00	—	—	—	—	—	—
	Bhandardara Quarry	do	do	do	2·76	—	—	1·27	883·00	—	—	—	—	—	—
	do	Compact basalt	Aphanitic	do	—	—	—	2·07	—	—	—	—	—	—	—

(*Continued*)

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE — *Contd*

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974‡)	Porosity, Percent (IS : 1124-1974‡)	Water Absorption, Percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1121-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability, Percent Loss (IS : 1126-1974‖)	Change in Absorption, Percent	Change in Volume, Percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Bhandardara Quarry	Zeolitic basalt	Amygdaloidal	Greyish black	—	—	—	1·27	—	—	—	—	—	—	—
	Bhandardara	Compact basalt	Aphanitic	do	2·79	—	—	2·12	553·00	—	—	—	—	—	—
	Near Bhandardara Village	do	do	do	2·80	—	—	1·00	1227·00	—	—	—	—	—	—
	Quarry Near Prawara Project	Compact basalt	Aphanitic	do	2·70	—	—	1·10	979·00	—	—	—	—	—	—
	do	Zeolitic basalt	Amygdaloidal	do	2·80	—	—	1·40	822·00	—	—	—	—	—	—
	Shandi Ghat Quarry	Compact basalt	Aphanitic	do	2·99	—	—	1·91	751·00	—	—	—	—	—	—
	Kolarghati Road Quarry	do	do	do	2·79	—	—	1·20	1136·00	—	—	—	—	—	—
	Spillway Quarry	Zeolitic basalt	Amygdaloidal	do	2·70	—	—	1·53	635·00	—	—	—	—	—	—
	do	do	do	do	2·83	—	—	1·60	739·00	—	—	—	—	—	—
	Hill Slope Quarry	do	do	do	2·62	—	—	2·14	810·00	—	—	—	—	—	—
	do	do	do	do	2·72	—	—	1·37	1095·00	—	—	—	—	—	—
	Shundi Ghatghar Quarry	Compact basalt	Aphanitic	do	—	—	—	1·91	—	—	—	—	—	—	—
	Kolarghoti Road	do	do	do	—	—	—	1·20	—	—	—	—	—	—	—
	Quarry at Spillway Site	Zeolitic basalt	Amygdaloidal	do	—	—	—	2·13	—	—	—	—	—	—	—
	Quarry Near Buttress	do	do	do	—	—	—	3·16	—	—	—	—	—	—	—
	Near	Compact basalt	Aphanitic	do	—	—	—	1·00	—	—	—	—	—	—	—
2.	**Akola**														
	Akola	do	do	do	2·90	—	—	0·31	2247·00	—	—	—	—	—	—
	do	Deccan Trap	Fine grained compact basalt	Light grey	2·95	2·90	1·73	0·31	2247·00	258·00	512·00	1·08	+30·30	—0·192	—

(*Continued*)

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE — *Contd*

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974‡)	Porosity, percent (IS : 1124-1974‡)	Water Absorption, percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1121-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability, percent Loss (IS : 1126-1974‖)	Change in Absorption, percent	Change in Volume, percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	B & C Dn. Murtizapur	Zeolitic basalt	Amygdaloidal	Greyish black	2·83	—	—	0·77	827·00	—	—	—	—	—	—
	do	do	do	do	—	—	—	0·77	—	—	—	—	—	—	—
3.	**Amravati**														
	Amravati	Compact basalt	Aphanitic	do	2·80	—	—	1·76	755·00	—	—	—	—	—	—
	Wadi Quarry	Deccan trap	Fine grained basalt	Black	2·09	2·80	6.87	1·76	755·00	177·00	650·00	0·51	−46·59	−0·060	—
4.	**Aurangabad**														
	Aurangabad	Compact basalt	Aphanitic	Greyish black	2·67	—	—	3·02	693·00	—	—	—	—	—	—
	do	Zeolitic basalt	Amygdaloidal	do	2·67	—	—	1·41	344·00	—	—	—	—	—	—
	Aurangabad Nagar Road 7 Miles	Deccan trap	Fine grained amygdaloidal prophyritic basalt	Black	2·98	2·67	10·47	1·41	344·00	121·00	216·00	1·32	−13·21	−0·771	Surface of specimens became rough at the end of 20 cycles of durability
	Hoshangate Quarry	Deccan trap	Medium grained compact basalt	Grey	2·95	2·67	9·41	3·02	603·00	—	—	2·86	−10·13	−0·355	Surface became rough after durability test
5	**Buldhana**														
	Jambudhota Quarry	Compact basalt	Aphanitic	Greyish black	2·82	—	—	3·10	561·00	—	—	—	—	—	—
	Kund Quarry	do	do	do	2·80	—	—	3·27	673·00	—	—	—	—	—	—
6.	**Bhir**														
	Bhir	do	do	do	2·88	—	—	0·53	2290·00	—	—	—	—	—	—
	Rajuri Quarry	Deccan trap	Fine grained compact basalt	Dark grey	3·00	2·88	3·94	0·53	2290·00	339.00	201·00	0·06	−26·45	+0·032	—

(*Continued*)

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE — *Contd*

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974‡)	Porosity Percent (IS : 1124-1974‡)	Water Absorption, Percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1121-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability, Percent Loss (IS : 1126-1974‖)	Change in Absorption, Percent	Change in Volume, Percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
7.	**Bombay**														
	Bombay	Compact basalt	Aphanitic	Greyish black	2·97	—	—	0·34	862·00	—	—	—	—	—	—
	Andheri	Deccan trap	Medium grained basalt	Black	3·12	2·97	4·69	0·34	862·00	270·00	908·00	0·07	—39·55	– 0·097	—
8.	**Dhulia**														
	Aner Dam	Compact basalt	Aphanitic	Greyish black	2·80	—	—	4·00	544·00	—	—	—	—	—	—
	do	Zeolitic basalt	Amygdaloidal	do	2·76	—	—	2·30	1433·00	—	—	—	—	—	—
	do	do	do	do	2·70	—	—	2·73	557·00	—	—	—	—	—	—
	do	do	do	do	2·80	—	—	2·00	971·00	—	—	—	—	—	—
9.	**Jalgaon**														
	Jalgaon	Compact basalt	Aphanitic	Greyish black	2·86	—	—	0·38	1001·00	—	—	—	—	—	—
	do	do	do	do	2·72	—	—	2·93	718·00	—	—	—	—	—	—
	do	do	do	do	2·92	—	—	0·24	2092·00	—	—	—	—	—	—
	Tapi Quarry	do	do	do	2·94	—	—	0·99	898·00	—	—	—	—	—	—
	do	do	do	do	2·96	—	—	2·17	396·00	—	—	—	—	—	—
	do	do	do	do	2·80	—	—	3·06	572·00	—	—	—	—	—	—
	do	do	do	do	—	—	—	0·99	—	—	—	—	—	—	—
	do	do	do	do	—	—	—	2·17	—	—	—	—	—	—	—
	do	Massive basalt	do	do	—	—	—	2·63	—	—	—	—	—	—	—
	Tapti Quarry	Compact basalt	Aphanitic	do	2·80	—	—	2·63	523·00	—	—	—	—	—	—
	Asara Quarry	do	do	do	2·98	—	—	1·60	2318·00	—	—	—	—	—	—
	Meharun Quarry	do	do	do	—	—	—	0·73	2543·00	—	—	—	—	—	—
	do	Deccan trap	Fine grained compact basalt	Dark grey	2·94	2·92	0·54	0·24	2092·00	—	—	0·89	+65·48	—0·063	—

(*Continued*)

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE — *Contd*

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974‡)	Porosity, Percent (IS : 1124-1974‡)	Water Absorption, Percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1121-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability, Percent Loss (IS : 1126-1974‖)	Change in Absorption, Percent	Change in Volume, Percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Hatnur Dam Dn.	Compact basalt	Aphanitic	Greyish black	2·85	—	—	0·86	1432·00	—	—	—	—	—	—
	do	Zeolitic basalt	Amygdaloidal	do	2·70	—	—	3·43	411·00	—	—	—	—	—	—
	Sakegaon Quarry	Compact basalt	Aphanitic	do	2·85	—	—	2·67	460·00	—	—	—	—	—	—
	do	do	do	do	—	—	—	2·67	—	—	—	—	—	—	—
	Kandari Quarry	do	do	do	—	—	—	2·63	—	—	—	—	—	—	—
	do	do	do	do	2·73	—	—	2·63	393·00	—	—	—	—	—	—
	Bharana Quarry	do	do	do	—	—	—	2·93	—	—	—	—	—	—	—
	Derabardi Quarry	Deccan trap	Medium grained basalt	Greenish grey	3·31	2·86	13·56	0·38	1001·00	—	—	0·46	+13·31	Nil	—
	Takarkheda	Deccan trap	Medium grained slightly weathered basalt	Light grey	3·23	2·72	15·73	2·93	718·00	—	—	0·57	+4·61	—0·131	Surface became rough after durability test
10.	**Nasik**														
	Karanjwan Dam Foundation	Compact basalt	Aphanitic	Greyish black	2·61	—	—	0·85	208·00	—	—	—	—	—	—
	do	do	do	do	2·62	—	—	1·00	355·00	—	—	—	—	—	—
	Karanjwan Dam Dn. Foundation of Dam	Zeolitic basalt	Amygdaloidal	do	2·68	—	—	1·46	236·00	—	—	—	—	—	—
	do	do	do	do	2·65	—	—	2·50	208·00	—	—	—	—	—	—
	do	do	do	do	2·74	—	—	0·84	301·00	—	—	—	—	—	—
	do	do	do	do	—	—	—	1·46	—	—	—	—	—	—	—
	do	Compact basalt	Aphanitic	do	—	—	—	1·00	—	—	—	—	—	—	—
	Palkhed Canal Dn. Weir Site	do	do	do	2·90	—	—	0·62	1923·00	—	—	—	—	—	—

(*Continued*)

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE — *Contd*

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974‡)	Porosity, Percent (IS : 1124-1974‡)	Water Absorption, Percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1121-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability, Percent Loss (IS : 1126-1974‖)	Change in Absorption, Percent	Change in Volume, Percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Manmad Lasalgaon Road	Compact basalt	Aphanitic	Greyish black	2·88	—	—	1·63	673·00	—	—	—	—	—	—
	Dabhadi	do	do	do	2·87	—	—	0·96	2005·00	—	—	—	—	—	—
	Burai River Bridge Village Chimthan	do	do	do	2·73	—	—	2·49	684 00	—	—	—	—	—	—
	do	do	do	do	2·90	—	—	2·07	1313·00	—	—	—	—	—	—
	Nandgaon Quarry	do	do	do	2·80	—	—	1·67	1615·00	—	—	—	—	—	—
	do	do	do	do	2·90	—	—	0·32	2694·00	—	—	—	—	—	—
	Vaitarna Masonry Dam Dn. Dam Foundation	do	do	do	**2·76**	—	—	1·10	1496·00	—	—	—	—	—	—
	do	do	do	do	2·76	—	—	2·20	841·00	—	—	—	—	—	—
	do	do	do	do	2·75	—	—	2·00	680·00	—	—	—	—	—	—
	Chankapur Quarries	Zeolitic basalt	Amygdaloidal	do	2·74	—	—	2·64	597·00	—	—	—	—	—	—
	do	do	do	do	2·73	—	—	1·15	968·00	—	—	—	—	—	—
	do	do	do	do	—	—	—	2·64	—	—	—	—	—	—	—
	do	do	do	do	—	—	—	1·15	—	—	—	—	—	—	—
	Spillway Quarry	do	do	do	2·56	—	—	3·68	509·00	—	—	—	—	—	—
	do	do	do	do	2·7	—	—	1·06	408·00	—	—	—	—	—	—
	Indhwani Quarry	do	do	do	2·80	—	—	1·65	822·00	—	—	—	—	—	—
	do	do	do	do	2·83	—	—	1·18	658·00	—	—	—	—	—	—
	do	do	do	do	2·96	—	—	0·96	658·00	—	—	—	—	—	—
	Mahadevi Quarry	do	do	do	2·81	—	—	2·07	936·00	—	—	—	—	—	—
	do	do	do	do	2·83	—	—	1·83	635·00	—	—	—	—	—	—
	Nasik	do	do	do	2·64	—	—	0·33	831·00	—	—	—	—	—	—
	Special Project Dn. Foundation of Dam	do	do	do	2·65	—	—	2·34	746·00	—	—	—	—	—	—
	Dabhadi	Compact basalt	Aphanitic	do	—	—	—	0·96	—	—	—	—	—	—	—

(*Continued*)

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE — *Contd*

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974)‡	Porosity, Percent (IS : 1124-1974‡)	Water Absorption, Percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1121-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability, Percent Loss (IS : 1126-1974‖)	Change in Absorption, Percent	Change in Volume, Percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
11.	**Osmanabad**														
	Osmanabad	Compact basalt	Aphanitic	Greyish black	2·96	—	—	0·23	2814·00	—	—	—	—	—	—
	do	do	do	do	2·93	—	—	0·22	1346·00	—	—	—	—	—	—
	do	do	do	do	2·90	—	—	0·46	989·00	—	—	—	—	—	—
	do	do	do	do	2·95	—	—	0·50	665·00	—	—	—	—	—	—
	do	Deccan trap	Fine grained basalt	Black	3·01	2·95	1·96	0·50	665·00	195·00	561·00	0·34	—34·43	—0·124	—
	Latur Quarry	do	Medium grained compact basalt	Greenish grey	3·01	2·93	2·56	0·22	1346·00	103·00	527·00	0·34	+76·26	—0·128	—
	Udgir Quarry	Silicious rock	Fine grained compact basalt	Dark grey	2·97	2·90	2·29	0·46	989·00	319·00	750·00	0·41	+2·35	+0·212	—
12.	**Parbhani**														
	Gohan Quarry	Deccan trap	Medium grained compact basalt	Dark grey	2·93	2·71	7·44	1·27	808·00	142·00	205·00	4·56	—23·52	—0·097	Cores scaled-out a thin layer of the thickness of 0·05" after durability test
13.	**Pune**														
	Poona	Compact basalt	Aphanitic	Greyish black	2·97	—	—	1·40	521·00	—	—	—	—	—	—
14.	**Ratnagiri**														
	Ratnagiri	do	do	do	2·90	—	—	0·52	1592·00	—	—	—	—	—	—
	do	Deccan trap	Medium grained compact basalt	Light grey	2·95	2·90	1·73	0·52	1592·00	283·00	512·00	0·80	+10·90	—0·61	—

(*Continued*)

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE — *Contd*

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974‡)	Porosity, Percent (IS : 1124-1974‡)	Water Absorption, Percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1124-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability, Percent Loss (IS : 1126-1974‖)	Change in Absorption, Percent	Change in Volume, Percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
15.	**Sangali**														
	Sangali	Compact basalt	Aphanitic	Greyish black	2·90	—	—	0·51	1238·00	—	—	—	—	—	—
	do	do	do	do	2·89	—	—	0·55	1378·00	—	—	—	—	—	—
	do	do	do	do	2·85	—	—	0·76	1271·00	—	—	—	—	—	—
	do	do	do	do	2·91	—	—	0·36	1165·00	—	—	—	—	—	—
	do	Zeolitic basalt	Amygdaloidal	do	2·91	—	—	0·46	1296·00	—	—	—	—	—	—
	Birnal Quarry	Deccan trap	Fine grained amygdaloidal basalt	Grey	3·08	2·91	5·81	0·46	1296·00	237·00	826·00	0·09	—38·11	—0·364	—
	Pavi Quarry	do	Fine grained basalt	Black	3·02	2·90	4·12	0·56	1238·00	194·00	484·00	0·25	—48·44	—0·450	—
	Siddhewadi	do	do	do	3·03	2·91	4·40	0·36	1165·00	187·00	378·00	0·42	—26·02	—0·272	—
	Talichi Quarry	do	do	Grey	3·02	2·89	4·64	0·55	1378·00	212·00	507·00	0·19	—45·49	—0·885	—
	Tasgaon	do	Fine grained prophyritic basalt	Black	3·03	2·85	6·29	0·76	1271·00	187·00	481·00	0·29	—34·51	—0·519	—
16.	**Satara**														
	Satara	Zeolitic basalt	Amygdaloidal	Greyish black	2·91	—	—	0·41	1214·00	—	—	—	—	—	—
	do	Deccan trap	Fine grained amygdaloidal basalt	Black	3·06	2·91	5·09	0·60	916·00	163·00	502·00	0·11	—15·05	—0·23	—
17.	**Sholapur**														
	Sholapur	do	do	do	3·07	2·96	3·52	0·41	1214·00	1224·00	631·00	0·46	+7·29	—0·054	—
	do	Zeolitic basalt	Amygdaloidal	Greyish black	2·96	—	—	0·41	1214·00	—	—	—	—	—	—
	Ujjani Quarry	Compact basalt	Aphanitic	do	2·89	—	—	0·87	1833·00	—	—	—	—	—	—
	do	do	do	do	3·00	—	—	1·40	1608·00	—	—	—	—	—	—
	do	do	do	do	2·87	—	—	0·96	1571·00	—	—	—	—	—	—

(Continued)

TABLE 1 TEST RESULTS OF BUILDING STONES IN MAHARASHTRA STATE — *Contd*

Sl No.	Name of Place	Rock Type	Physical Properties										Weathering (IS : 1125-1974¶)		Remarks
			Structure and Texture (IS : 1123-1975*)	Colour (IS : 1123-1975*)	True Specific Gravity (IS : 1122-1974†)	Apparent Specific Gravity (IS : 1124-1974‡)	Porosity Percent (IS : 1124-1974‡)	Water Absorption, Percent (IS : 1124-1974‡)	Compressive Strength kg/cm² (IS : 1121-1974§)	Transverse Strength kg/cm² (IS : 1121-1974§)	Shear Strength kg/cm² (IS : 1121-1974§)	Durability Percent Loss (IS : 1126-1974‖)	Change in Absorption, Percent	Change in Volume, Percent	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
18.	**Thane**														
	Bhatasa Quarry	Compact basalt	Aphanitic	Greyish black	2·77	—	—	2·93	501·00	—	—	—	—	—	—
	Haldapada Quarry	do	do	do	2·70	—	—	0·71	1691·00	—	—	—	—	—	—
	Warwada Quarry	do	do	do	2·75	—	—	0·33	2749·00	—	—	—	—	—	—
	Udhawa Quarry	do	do	do	2·70	—	—	0·62	2075·00	—	—	—	—	—	—
	Talasari Quarry	do	do	do	2·75	—	—	0·31	1664·00	—	—	—	—	—	—
	Dairy Project Dapchary	do	do	do	2·99	—	—	1·60	1656·00	—	—	—	—	—	—
19.	**Wardha**														
	Wardha	do	do	do	2·96	—	—	0·10	2568·00	—	—	—	—	—	—
	Wardha	do	do	do	2·95	—	—	0·14	2773·00	—	—	—	—	—	—
	Bhoskhuri Quarry	Deccan trap	Fine grained compact basalt	Dark grey	3·01	2·96	1·73	0·10	2568·00	335·00	866·00	0·41	+165·8	+0·0003	—
	Yelikeli quarry	do	do	do	2·97	2·95	0·81	0·14	2773·00	—	—	0·67	+122·4	—0·152	—
20.	**Yeotmal**														
	Yeotmal	Compact basalt	Aphanitic	Greyish black	2·91	—	—	0·68	2609·00	—	—	—	—	—	—
	Monegaon Quarry	Deccan trap	Fine grained compact basalt	Grey	2·91	2·87	1·10	0·66	2073·00	215·00	639·00	0·46	—39·8	—0·319	—
	Umarkhed Quarry	do	do	Dark grey	2·96	2·91	1·46	0·68	2609·00	—	—	0·58	—28·17	—0·126	—
	Woni Quarry	Sand stone	Medium grained sand stone	Brownish yellow	2·66	2·21	16·82	5·58	468·00	38·00	—	14·02	+9·88	—0·033	Cores were cracked after durability test

*Method of identification of natural building stones (*first revision*).
†Methods of test for determination of true specific gravity of natural building stones (*first revision*).
‡Method of test for determination of water absorption, apparent specific gravity and porosity of natural building stones (*first revision*).
§Methods of test for determination of strength properties of natural building stones (Parts I to IV).
‖Method of test for determination of durability of natural building stones (*first revision*).
¶Method of test for determination of weathering of natural building stones (*first revision*).

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	*Unit*	*Symbol*
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous Intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	*Unit*	*Symbol*
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	*Unit*	*Symbol*	*Definition*
Force	newton	N	1 N = 1 kg. m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

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Printed at Delhi Printers, Delhi, India