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Standard Terminology Relating to Dimension Stone¹

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This standard has been approved for use by agencies of the U.S. Department of Defense.

INTRODUCTION

Dimension stone, as used here, is natural stone that has been selected and fabricated to specific sizes or shapes, with or without one or more mechanically dressed or finished surfaces, for use as building facing, curbing, paving stone, monuments and memorials, and various industrial products. The term *dimension stone* is in contradistinction to crushed and broken stone, such as is used for aggregate, roadstone, fill, or chemical raw materials. Because all stone is a natural material, the definition excludes all manmade materials that simulate stone. In common practice, some dimension stones are reinforced, filled, or surface treated.

Terms used in definitions and nomenclature shall be interpreted in accordance with commonly accepted scientific and technical terms of the geological sciences except as otherwise specifically noted.

Examples of such exceptions are the broader commercial definitions of granite and marble, which have become well established in the dimension stone industry and trade. Definitions and terms included in these definitions have been formulated in accordance with common industrial usage *where this is not in conflict with current scientific usage*.

GENERAL TERMS

anchor—in general, a metal shape inserted into a slot or hole in the stone that provides for the transfer of loads from the stone to the building structure, either directly or through an intermediate structure.

anchorage—the system consisting of stone, anchor and primary structure, secondary structure or back-up preventing lateral movement of the stone.

arris—the junction of two planes of the same stone forming an external edge.

ashlar—(1) a squared block of building stone; (2) a masonry of such stones; (3) a thin-dressed rectangle of stone for facing of walls (often called ashlar veneer).

bearing check—a slot, generally not continuous, cut into the back or bed of dimension stone to accommodate a supporting angle or clip (see Fig. 1.)

¹ This terminology is under the jurisdiction of ASTM Committee C18 on Dimension Stone and is the direct responsibility of Subcommittee C18.91 on Nomenclature and Definitions.

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building stone—natural rock of adequate quality to be quarried and cut as dimension stone as it exists in nature, as used in the construction industry.

chip—an irregularly shaped fragment dislodged from a stone surface.

cladding—nonload-bearing stone used as the facing material in wall construction that contains other materials.

coping—dimension stone used as the top course of a masonry wall, often sloped to shed water.

crack—a partial break in the stone (see fracture, microcrack, seam).

cubic stock—in general, a thick dimension stone unit which is not precisely defined in terms of thickness for every kind of stone, particularly for limestone and sandstone. For marble or granite, cubic stock is a unit that is greater than 50 mm in thickness. For limestone, cubic stock is a unit that is greater than 75 mm to 100 mm in thickness, and for sandstone, a unit that is greater than 150 mm to 200 mm in thickness. (In contrast, see *thin stone*.)

cut stone—stone fabricated to specific dimensions.

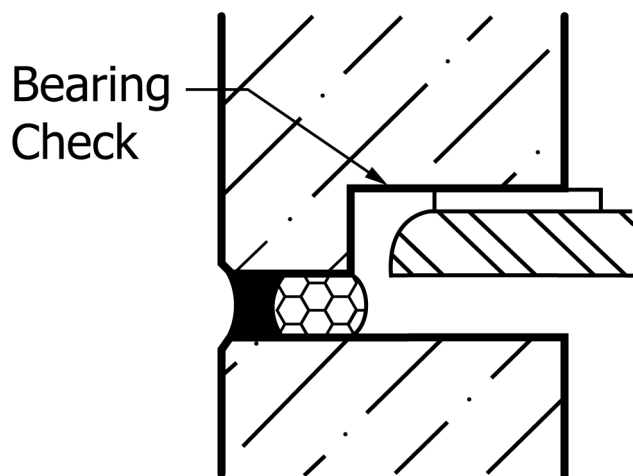


FIG. 1 Bearing Check

dimension stone—natural stone that has been selected and fabricated to specific sizes or shapes.

DISCUSSION—The term *dimension stone* is in contradistinction to crushed and broken stone, such as is used for aggregate, roadstone, fill, or chemical raw materials. In common practice, some dimension stones are reinforced, filled, or surface treated.

dressed stone—See **cut stone**, **finished stone**.

drip/drip edge, *n*—a groove cut on the underside of a sill or projecting stone, designed to direct water away from the building and help prevent water from flowing back onto the structure below.

dry seam—a natural separation that has not been filled or bonded.

durability—the measure of the ability of dimension stone to endure and to maintain its essential and distinctive characteristics of strength, resistance to decay, and appearance. Durability is based on the length of time that a stone can maintain its innate characteristics in use. This time will vary depending on the environment, the use, and the finish of the stone in question (for example, outdoor versus indoor use).

fabrication—when applied to dimension stone, any of the processes involved in changing a raw stone piece to its final end use form. This includes, but is not limited to cutting, splitting, grinding, drilling, or face-finishing.

fading (slate)—a slate that has a significant color change within the first year of exposure to weather, often the result of chemical alteration of the iron minerals.

finished stone—dimension stone with one or more mechanically exposed surfaces.

filling—the application of materials, often cements or synthetic resins, into natural voids in a stone during fabrication.

fissure—a naturally occurring separation which may or may not affect the performance of the stone.

flagstone—nominally flat pieces of stone generally furnished in irregular shapes with broken edges, typically used for paving.

fleuri-cut (cross-cut), *adj*—describes stone that is cut parallel to the natural veining.

flooring—stone used as in interior pedestrian wearing surface.

fracture—a complete break in the stone (see crack, microcrack, seam).

freestone—a stone having little or no preferential direction of splitting which may be cut freely in any direction without fracture or splitting.

gage/gauge—grinding (or otherwise processing) stone to a uniform or precise thickness for tolerance or accuracy.

grain—(1) a distinguishable rock constituent which itself has a distinct identity, for example, a mineral crystal, an oolith, a rock fragment (in sedimentary rocks), or clast.

(2) a direction in a rock body along which it is more easily broken, split, or cut. See rift.

granular—composed of particles visible to the unaided eye. For sedimentary stone, the predominant particle distribution is less than 4 mm in size.

hysteresis—the residual strain in stone after the stress causing such strain is changed.

installation—the process of assembling dimension stone into a structure.

kerf—(1) a slot, either local or continuous, cut into the edge of a stone, typically with a saw blade, for insertion of anchors. (2) the width of a cut when sawing through stone blocks or jointing slabs. (See Fig. 2.)

lamination—when applied to the processing of dimension stone, refers to the adhesive bonding of multiple layers of stone, or stone to other materials.

liner—a small block of stone secured to the rear face of a dimension stone panel with pins and adhesive for the purpose of providing a concealed horizontal bearing surface (see Fig. 3a and 3b in C1242).

microcrack—a crack too small to be seen with the unaided eye (see crack, fracture, seam).

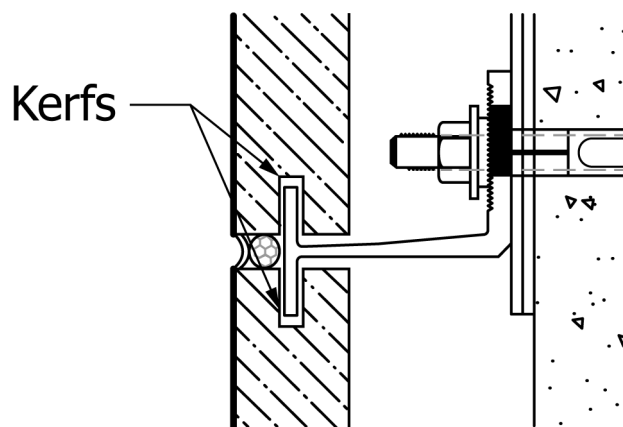


FIG. 2 Kerfs