

but limited to between fifteen to thirty per cent. of the whole mass, yields poor lime.

Limestones containing silica in combination with alumina, (common clay) magnesia, &c., in various proportions limited to eight or twelve per cent. of the whole mass, yield moderately hydraulic limes; and when they contain more than twenty and up to thirty per cent. of the above ingredients, but the silica in the proportion at least of one-half, the limestone yields *eminently* hydraulic limes. The experiments upon which the above conclusions are based, show that limes owe their hydraulicity, or power of setting under water, to the presence of a certain quantity of clay, and sometimes, but rarely, to a certain quantity of pure silica. The stones containing much silica in the composition of the clay, swell in setting, and are likely to dislocate the masonry executed with them; those, on the contrary, in which the clay is in excess, are likely to shrink and crack. The magnesian limestones or Dolomites, appear to be the least exposed to these inconveniences. Limestones which contain more fossils are exposed to the inconvenience of producing a lime likely to slack at various and uncertain periods.

Berthier's mode of analysis was recommended, which is to be found in Wealde's Rudimentary Treatise on Limes and Cements.

Brick clays should also be collected and their per centage of sand recorded, which should be from fifteen to twenty per cent. of the whole mass. Pottery clays should also be sent in and samples of their ware obtained from the works at Dartmouth and the Truro road; this would answer the double purpose of being a show-room for the manufacturers, and stimulate them to improve their wares. Felspar is a large ingredient in our granite rocks, and therefore porcelain clays are likely to be found in their neighborhood.