



Black limestone - the characteristic material in Baroque architecture in Poland.

M. Marszalek, A. Skowroński

AGH – University of Science and Technology, Cracow, Poland (mmarszal@agh.edu.pl /
Phone: +48(12)6172376)

The Devonian black limestone (Givetian), commonly called a marble, was widely applied in the Polish architecture of 17th and 18th centuries. It can be found inside many churches (altars, epitaphium plaques, baptismal fonts, etc.), less often in outer elements (mainly portals).

The stone is compact and occurs in three varieties: the homogeneous, micritic limestone, the micritic limestone with fossils and the nodular limestone, occurring in the form of horizontal layers separated by discontinuities filled with clay minerals.

Physico-mechanical properties (apparent density, water absorption ability, frost and abrasion resistance, compressive strength) of the limestone are good and the stone generally withstands well the action of atmospheric factors, although some alterations of its surface can usually be observed. They affect mainly the original black colour, which changes to grey or even white.

The historical quarries of this limestone are located near Cracow in the Dębnik village. One of the oldest quarries was owned by Carmelite monks and is called the “Carmelite” quarry.

The data presented here are the result of a documentary and analytical study of the samples from “Carmelite” quarry.

This study was partly supported by the AGH – University of Science and Technology project No. 10.10.140.448.