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COMPUTER PROCESSING OF SCANNED IMAGES FOR DETERMINING DECORATIVENESS OF GABBRO

The rational methods of researching the quality of natural facing stone will allow bringing down its prime cost and improve quality. Stone decorativeness at Kamianobridskyi field of gabbro is chosen as an object of research.

The uniform black coloring is chosen as a criterion of decorativeness estimation. Both, the degree of blackness of gabbro and basic aesthetic indexes of wares made from it, determine a market value of stone.

The quality of a block of raw material is determined by the presence of defects, the energy intensity of the process, as well as decorative and corrosion resistance of products wares that will be produced from it.

Samples for this comparison are taken from different fields of the deposit. The distance between sampling points is in the range from 10 m to 35 m. There were 6 samples selected; these samples were preliminary polished before research (fig. 1.).

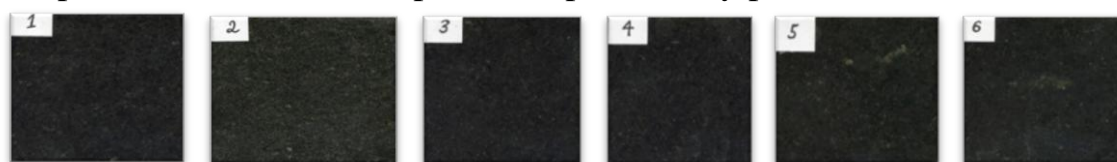


Fig.1 Scanned images of samples of gabbro for research

Mentioned above samples were further processed with a scintiscanner. Obtained images were processed with MdiStone program; relative areas of a zone of uniformly black color were determined in RGB colour system by means of mask imposition. Got next results in percents:

sample 1 – 40 %;
sample 2 – 20 %;
sample 3 – 45 %;
sample 4 – 43 %;
sample 5 – 27 %;
sample 6 – 30 %.

The varieties of natural stone should be chosen not only taking into account the aesthetic reasoning but also physical and technical descriptions of stone, its mineralogical composition and various inclusions.

By means of the offered methodology it is possible to educe various inclusions and estimate the degree of defectiveness.

The criterion for determining the degree of decorativeness of a stone is its uniform black coloring. Both, the degree of blackness of gabbro and basic aesthetic indexes of wares made from it determine a market value of stone. Therefore, we recommend to introduce computer processing of scanned images for analysis and expert estimation of stone in relation to its facing properties.