



## **Green sandstones – building and decorative stones from the Czech Republic**

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Green sandstones (glauconitic sandstones, Cenomanian) are historical building and statuary sandstone of region East Bohemia in surroundings of Vamberk and Potštejn towns and as important building and decorative stone in the region of Northern Moravia and Silesia from the Moravian-Silesian Beskydy Mts. in surroundings of Český Těšín town. These stones are used in the buildings from 13<sup>th</sup> century up to today. The mineral composition, types and distribution of pores and physical properties and history of utilization there are different each other. Therefore is mineralogical and petrological study focused on the stone stability in the buildings, mineral transformation in the course of weathering and by extremely rock thermal oxidation up to 700°C (fire). The glauconite mineralogy and oxidation of glauconite with different  $+2\text{Fe}/+3\text{Fe}$  ratio from two areas are studied as most sensitive rock-forming mineral. The physical properties, porosimetry and time depended moisture capacity and vaporization in standard climatic conditions are determinate for above two areas. The examples of historical and actual utilizations of stone in the architecture and in the buildings and cases of weathering of both types of glauconite sandstones are described.