



Old quarries from the surroundings of Rheims (France) and differentiated stone uses in monuments

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Medieval and antique monuments in Rheims, such as Notre Dame Cathedral and the Gallo-Roman Door of Mars respectively, were built with mixed facies of Lutetian limestones from the nearby Ile de France plateau. The closest outcrops were located about twenty kilometers from the city, but the main deposits were more distant, at approximately 30-40 km.

The study of about 500 building stone samples from three archeological and cultural heritage sites, showed a reasoned use of the different facies according to their physical properties. Petrographic analyses of exploited layers in old quarries refined the first estimate of stone origin. The exact provenances of stones used during antique and medieval times appeared slightly different: antique quarries seemed more distant than medieval ones.

Our sedimentological study has underlined how greatly ancient builders controlled the efficiency of materials, whereas the geoarcheological analysis of subterranean old quarries could explain the progressive fall into decay of the stone industry in this sector.