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Slates from Uruguay: a traditional natural stone

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Slates were traditionally used as roofing material or for cladding worldwide and also in Uruguay. In regions where this resource was easily mined, the widespread application of slates in constructions resulted in the development of characteristic cultural landscapes. The application of slates in a wider sense is nowadays open for all uses of dimensional stone, compared to the restricted use as roofing or cladding material in the past. This has been achieved by the discovery and mining of new deposits within the last 25 years worldwide. Furthermore, the optimization of mining techniques that allows the excavation of larger blocks and the technical development for further handling of the blocks has contributed to an open spectrum of applications.

The slate deposits from Uruguay are associated with the Neoproterozoic thrust and fold belt of the Dom Feliciano Belt. The slates are linked to calc-silicate strata in a greenschist facies volcano-sedimentary sequence and the deposits are located in the limb of a regional fold, where bedding and cleavage are parallel. The main lithotype is a layered and fine-grained calcareous phyllite with a quite diverse palette of colors: light green, grey, dark grey, reddish and black. The mined slate is split into slabs 0.5 - 2cm thick. The technical properties were investigated in a very systematic way with respect to the new European standards, showing values comparable to those registered for internationally known slates.

In the past, the average production in Uruguay was around 4000 tons/year and a historical maximum of 13,000 tons was reached in 1993. The oscillations in the regional demand were the cause of several flourishing and decay cycles in the activity, but our investigation shows a considerable volume of indicated resources and therefore a very good potential. Exploration for colors and qualities and quantification of reserves is a prerequisite for the development of the sector.