

This text is meant for all people from general public with interest in mathematics and geometry. Primarily it is meant to be study material for teachers of mathematics and descriptive geometry at secondary schools. In the thesis there is included summary and properties of surfaces used in building constructions and their parametric and implicit expression. Thereinafter it deals with particular use of these rectilinear planes and also other ones in construction of arches, specifically in arches of some Santini's buildings. There is also mentioned a list of Santini's buildings and an in-depth analyse of geometry in plans of some of them. The text is supplemented with illustrative pictures made in Cabri Geometry II Plus (version 1.3.1), Maple 7, Rhino 3.0 and AutoCAD 2005, digital photographs and pictures from quoted literature.