Recently has found widespread use in image processing method in civil engineering. Image processing is the computer aided reproduction of the processes, which humans achieve by means of their vision system. This study is to assess the air spaces values of different concrete classes by the using image processing technique. For this purpose, different concrete series were obtained by using five different water/cement ratios. Physical and mechanical tests were conducted on the obtained specimens. In addition to these, the images obtained from the hardened concrete surfaces were processed and the percentages of cement matrices, aggregate and air gaps were calculated. The relationships between the values obtained by using such parameters via image processing technique and compressive strength values of the produced concrete specimens were investigated.

As a result, it was seen that the air spaces of concrete can be estimated with a high correlation by using the values obtained by means of image processing technique.