## Abstract

In this work, we propose to use the linear regression partial least square method to predict the output variables of the RA1G boiler. This method consists in finding the regression of an output block regarding an input block. These two blocks represent the outputs and inputs of the process. A criteria of cross validation, based on the calculation of the predicted residual sum of squares, is used to select the components of the model in the partial least square regression. The obtained results illustrate the effectiveness of this method for prediction purposes