

The gas compressor plants are bodies sensitive to accidental defects, the consequences of these defects on good operation of the gas pipeline can be critical. This paper presents an application of the fuzzy approach in fault detection and isolation of surge in this compression system. This paper illustrates an alternative implementation to the compression systems supervision task using the basic principles of model based fault detection and isolation associated with fuzzy modelling approach. Application results of a fault detection and isolation for a compression system are provided, which illustrate the relevance of the proposed fuzzy fault detection and isolation method. This work is considered a first step in accessing the factors that affect the success or limitations of surge detection and isolation in natural gas pipeline compressors