

Fault detection and diagnosis for continuous stirred tank reactor using neural network

ABSTRACT

The paper focuses on the application of neural network techniques in fault detection and diagnosis. The objective of this paper is to detect and diagnose the faults to a continuous stirred tank reactor (CSTR). Fault detection is performed by using the error signals, where when error signal is zero or nearly zero, the system is in normal condition, and when the fault occurs, error signals should distinctively diverge from zero. The fault diagnosis is performed by identifying the amplitude error of the CSTR output error.

Keyword: Fault detection and diagnosis; Neural network; CSTR