

Abstract

In this paper, we propose a new structural and qualitative approach to convert from Bond Graph to Digraph representation of a structural system which allows sensors placement optimization to solve faults detection and isolation problem. When the detection and isolation of faults of an existing system's sensors is impossible or uncertain, a reconfiguration sensor placement of this system should be considered. This paper proposes how this reconfiguration takes place by recovering all missing or redundant parts of the system. This novel approach is illustrated over a thermo-fluid tank application