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Abstract

ONLINE RE-CONFIGURABLE ABNORMAL & HAZARD
STATUS MONITORING AND ADVISORY SYSTEM
BASED ON GENERIC FAULT MODEL

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Industrial process plants such as chemical refineries and electric power generation are examples of dynamic systems, whose operation is continuously monitored for abnormal status. It poses a challenging diagnostic problem in which values are continuous, relatively large amount of control loops, parameter values keep changing, and diagnosis must be performed while the system operates. This paper describes the design and implementation of an online re-configurable abnormal & hazard status monitoring and advisory system (ASMAS) based on generic fault model, which monitors the dynamic system online, detects and resolves abnormal status intelligently. As abnormal or hazard status occurs it gives the operator alarm messages and advisory operating guides by multiple ways, i.e. noise, flash light, graphic, text and voice advice. ASMAS can be applied to many continuous or discrete processing industries as well as building safety and security systems.

Keywords: Online, Data Object, Fault Model, Advisory System, Dynamic System