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Refinery integrated process engineering and management systems

Munier Elsharif

University Technology Malaysia, Malaysia

Computer based modeling exhibits a behavioral based modeling system using theoretical ideal conditions. The importance of the adaptation of complex existing optimization approaches in order to take advantage of process plant simulation models is a key to achieving both standards and efficiency. Understanding the underlying fundamentals, i.e., the chemical engineering principles will enhance the accuracy of these models. Making the industrial production processes as efficient and standardized as possible is the goal of advance process control engineers. In addition, the design process for chemical process plants is characterized by a sequence of design phases and involves different departments, disciplines and contractors. For this reason, information integration is very important and when done manually becomes a task which is both tedious and error-prone. This contribution presents Integrated Process Engineering Management System (IPEMS) for information integration in chemical process plants. The system provides flexible data sharing and transfer of an industrial facility from operational functions into a driver of optimization continuity and efficiency. The paper discusses possible automation and control system architectures based on integrated incident workflow, rapid access to information, contextual awareness and ease-of-use. This helps reduce risk to business operations within an industrial facility.

Biography

Munier Elsharif has completed his PhD from Universiti Teknologi Malaysia. He is a passionate and results-driven Professional with over 15 years of experience in Chemical Engineering with an emphasis in Process Engineering as well as extensive experience in Oil Refinery Plant Operations including: Reaction kinetics, Reactor design, Process thermodynamics, Heat and mass transport. His area of expertise is in Process Simulation, Optimization and Data Management in Oil Refinery using Aspen Report Writer, User Calcs and Customized functionality for APC and API via VB/VBA code.

munierelsharif@gmail.com

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