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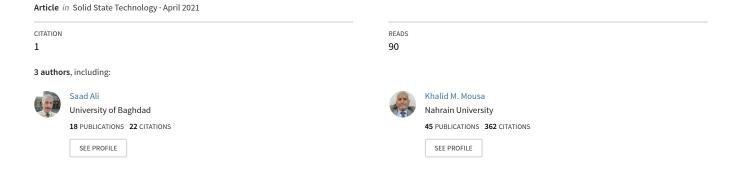
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Building Operational Sequence and Control of Fire Tube Boilers Using Ladder Logic with Zeliosoft Smart Relay

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Abstract

This research is a case study to solve control problems in Al Rasheed edible oil factory fire tube boilers. they have hopes to develop a new control system to manage boilers operation. The suggestion is to use Zelio soft programmable relays instead of the unavailable old control units. Operation philosophy was studied through works of literature, operation manuals, and standards. Programmable logic control relay is proposed as an advanced selection than PLC's . Boilers operation is accompanied by operation risks. many boilers were exploded in Iraq for different reasons. Some problems are attributed to manual operation mistakes. Extensive work was done to understand the operation sequence, emergency shutdown, and faults causing the trips. A computer program is designed and simulated to execute the operation sequence using Zliosoft 2 v5.3 ladder logic programming.

Keywords- Fire tube m boiler; Ladder logic; smart relays; Zelio soft)

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