Edge-IoT Architecture-Based Visualization Service Platform for RTO Real-Time Monitoring

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Abstract :

  In this study, we present the Edge IoT Architecture (Architecture) for analyzing the real-time state information of the heat storage thermal oxidizer (RTO) and implement a visualization method. The Edge-IoT architecture system interfaces with the programmable logic control (PLC) that controls the monitoring of RTO operations and transmits real-time data to a remote server, analyzes the channel data received through the IoT to build a database, and visualizes the characteristics of DB analysis.

IoT architecture implementation for fault diagnosis and maintenance of RTO designs IoT circuits on PLC control panels that control monitoring. Compatibility and information security are considered to facilitate remote maintenance. The received data is segmented by each channel and analyzed by a visualization algorithm to detect anomalies in the segmented data. At this time, the visualized data is judged to be normal, insufficient, or warning, depending on the threshold**.**

(Pt9)Keyword— RTO, real time monitoring, edge-IoT, PLC, visualization
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