7. CONCLUSION AND FUTURE SCOPE

The development and investigation of Local intelligence using an IMC-PID controller on the real-time fluid transport process plant are carried out in this paper. The real-time experimental results show that this Local intelligence using IMC-PID controller acts with provisioning smart decision making on the real-time data of the field parameters in order to optimize the process plant with minimum losses by means of its affordability and the reliability to conduct measurements remotely and in real-time of monitoring and control of field parameters. The experimental validation emphasizes has been engineered to condensed downtime, upgraded system accessibility, enriched control consistency, and unremitting system access. I/O remote-hub module with the control server, operator and engineer stations handling data organization, and gateway utilities are disseminated on an Ethernet linkage to confirm system veracity and well-timed data broadcast communication. The evaluation of this Local intelligence ensures that Condition Based Maintenance with the proactive event-driven computing paradigm for fully exploiting its capabilities by enabling proactive maintenance decisions ahead of time on the process plant, so that the operator can react pre-emptive prior to sort out occurrences of any failure on the process plant.

Regarding the future work, an internet of things (IoT) based reliable monitoring and control with local intelligence using IMC-PID controller modular architecture design along with SCADA/DCS which is outlined in this paper will be implied and investigated on this lab-scale fluid transport system process plant. It is expecting that the proposed IoT architecture will offer a promising and a novel infrastructure to remote monitoring and control in any industrial sectors [13].

CONFLICT OF INTEREST

All the contributors to this research work have no clashes of attention to announce and broadcasting this article.

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