Maintaining quality of bitumen emulsion plant Reliable solution for oil and gas industry



Ruma Engineering works started its business in the year 1993 with a Sole Proprietorship based in Kolkata, West Bengal (India). Ruma engineering works manufacture, supply and export fully automatic bitumen emulsion plant, fully automatic PMB/CRMB process plant and many more, with export percentage of 40%, Ruma engineering works is the leading exporter of our product range in Qatar, Bahrain, Indian Subcontinent and Asian Countries. Ruma enginnering works manufacture plants and other products as per customer requirements and provide them customized solutions.



Bitumen emulsion skid by Ruma engineering works

Customer challenge

To run and maintain an emulsion plant or modified bitumen plant for Oil and Gas customers. the plant had Pneumatic control valves, for bitumen, solvent & emulsify process line. Inline mixing process will create the final product and tested in a laboratory for quality parameters as per BSI-8887.

Customer was facing problem with existing electromagnetic flow meters and coriolis flow meters. The reading were not accurate hence the final output couldn't qualify the quality parameters. In some cases customer ended up with loss of complete batch. This initiated the discussion between Endress+Hauser and Ruma engineering works with a possibility of replacing the existing system.



Container for bitumen emulsion skid

Our solution

The problem was already identified. The main objective was to increase efficiency of the systems and reduce the wastage of Bitumen in the process.

A flow measurement solution based on coriolis and electro magnetic principles was proposed for there existing and new systems. This was inline with their requirement and thus customer agreed to replace the existing instruments with Endress+Hauser.

Reliable measurement, a coriolis mass flow meter was installed to measure the dosing of bitumen in the process and electro magnetic flow meter was used to measure the quantity of solvents to be mixed to get the final product. These flow meters were then used to automate the complete process.





Energy management, the complete process was automated based on flow measurement. Flow meters reading were the triggers to switch on or switch off the complete process. This resulted in better management of the electricity used in the process.



Troubleshooting demonstration to operator

Lower ownership cost, due to inefficiency of existing system, wastage of products and solvents were high. After implementation of solution by Endress+Hauser the error margins and wastage almost reduced to zero.

Services and support, customer was happy with the service and support delivered by Endress+Hauser. Specially after a bitter experience from previous supplier. They also appreciated the quality of the product and accuracy of the measurement, which resulted in lesser downtime, higher efficiency and increased quality of throughput.

The results

- Wastage of bitumen reduced almost to zero, resulting improved efficiency and quality of the final product.
- Reduction in consumption of electricity used in the process, making it energy efficient.
- Reliable measurement and products resulted in enhanced efficiency and cost saving.

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