

Acid Injection PTFE Internal Lining in Raw Water System

Authors : Fikri Suwaileh

Abstract : In the reverse osmosis (RO) water treatment plant, operation was suffering from several leaks on the acid injection point spool and downstream spools, due to insufficient injection monitoring and the coating failure leading to pin holes. The paper will go over the background of the leaks in the acid injection point, the process in the RO plant, the material, and coating used in the existing spools, the impact of these repeated leaks, the type of damage mechanism that occurred in the system due to the manner of acid injection and the heat in the spools, which lead to coating failure, leaks and water release. This paper will also look at the analysis, both the short- and long-term recommendations, and the utilization of Teflon internal lining to stop the leaks. Sharing this case study will enhance the knowledge of the importance of taking all factors that will lead to leaks in the acid injection points, along with the importance of utilizing the appropriate coating material lining to enhance the full system.

Keywords : corrosion, coating, raw water, lining

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