

The Investigation of Cracking on the Shell of Dryers (tag No. 2DR-1745 and DR-1402) in Shahid Tondguyan Petrochemical Company (STPC)

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Abstract : This research has been to investigate the cause of the stress corrosion cracking on dryer equipment (2DR-1745 and DR-1402) in Shahid Tondguyan Petrochemical Company (STPC). These dryers are as a drying powder Terphetic acid in CTA2 and CTA1 unit. After passing through RVF equipment, wet cake moisture content of about 14% and temperature of 90C changed into a dry cake with a moisture content of less than 0.1% and the final temperature of about 140C and sent out Final Silo (FS-1820). After the declaration of the operation department concerning the observation of acid leakage under the primary insulation was decided that at the first opportunity, this issue must be investigated. So, after the shutdown of a unit at the date 2012/10/20 (2DR-1745) and 2021/11/24 (DR-1402) and after washing the dryer wall, insulation around the wall opened and it was found to crack and leakage from some points.

Keywords : stress corrosion cracking, residual stress, austenitic stainless steel, Br- ion

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