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Experimental validation of methods to simulate make up processes in oilfield country tubular goods

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As a fundamental condition towards making use of the maximum performance of a threaded connection, the makeup process bears great importance for getting the necessary preloading of the joint, which enables a determined tubular string to be tight and to withstand all static and dynamic load modes present during the whole life of the well. However, due to the design nature of premium connections, it can be somewhat complicated to determine the optimum amount of applied torque which is big enough to make up the connection and achieve service tightness, but also small enough to avoid the development of some failure modes, like those related to excessive plastic deformation and galling. The purpose of this work aims to better understand the elastoplastic phenomena present during make up procedures by means of experimental validation of an axial-symmetric model for bilinear materials that is typically used for FE models during the design phase of OCTG proprietary connections.

Biography

Javier Holzmann is the Chief Engineer of the Full Scale Testing Lab and Lecturer for topics related with OCTG technology since 2006 and he has worked as an R&D Engineer for six years (2001-2006) in the R&D Center of Tenaris-Siderca, Argentina. He has MSc degree (2001) from the Academy of Engineering, University of Buenos Aires, Argentina and a PhD degree (2013) from the Technical University of Clausthal, Germany. Since 2001 he is involved in research activities related with OCTG design, testing and optimization, makeup procedures and development of laboratory testing devices and facilities.

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