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The Double Casing Shoe – An equipment which can replace a testing or a permanent packer for underground storage of H₂

Dr. Amer Abdel-Haq, Dr. Thomas Faber
UGS GmbH, Mittenwalde, Germany

Abstract

Tightness test methods vary in their technical and commercial execution. Applying of some tightness tests is mostly done by using a testing packer for various technical reasons. Especially for H₂-Storage the technical conditions of the testing/permanent packer are still in discussing.

Using a testing packer is strongly linked to the definition of the entire well integrity of storage well. As many producers are not willing to give a H₂-guarantee for their test packer, UGS GmbH developed a new tool (Double Casing Shoe - DCS) to replace the conventional testing packer as well as the permanent packer for storage operation. The DCS can be installed by new constructed storages or by already operated storages. The first application in a H₂-project in Northern Germany has confirmed the tightness and the applicability of the new invention.

The technical paper should also present the advantage of the (Double Casing shoe) when compared with conventional testing or permanent packer for storing Hydrogen

Keywords:

Double Casing Shoe, MIT; H₂-Tightness Test; Salt Cavern; Gas Test; Hydraulic Test; Leak Test; Long-Term Detection; Testing Packer; Permanent Packer