LOSAC© : A first salt cavern abandonment software

Benoît BROUARD*, Pierre BEREST and Gérard DURUP*****

***Brouard Consulting**
37 rue du petit-musc, 75004 Paris, France
Brouard@lms.polytechnique.fr

****LMS-G.3S, Ecole polytechnique**
Route de Saclay, 91128 Palaiseau, France
Berest@lms.polytechnique.fr

***** Gaz de France**
92-98 Boulevard Victor-Hugo, 92115 Clichy, France
Gerard.Durup@gazdefrance.com

Abstract

Over recent years, considerable research effort, especially by the SMRI, has been invested on the subject of the long-term abandonment of salt caverns. At this point in time, the industry has still not clearly identified a universally accepted concept or approach to this major problem. One seemingly promising trend already identified is to consider the evolution of a saturated brine filled salt cavern with respect to the system's thermal (brine expansion), geomechanical (cavern closure by creep) and hydraulic (brine micro-permeation in the salt massif) characteristics. Gaz de France has applied such a concept in the development of a computer programme named LOSAC intended to evaluate the long-term evolution of its salt caverns in different abandonment scenarios.

LOSAC is financed by Gaz de France and developed with Brouard Consulting and LMS/Ecole polytechnique (France). This presentation proposes a short demonstration of the software with the aim of illustrating a practical application of this specific cavern abandonment concept in a very user-friendly computer program.