

Test methods for determination of the resistance of PE 100-RC  
high-pressure piping materials to slow crack propagation  
**Brittle fracture the vital factor**

James McGoldrick, Mats Bäckman, Markus Haager and Joachim Hessel

Product loss from cracked pipelines may be the long-term consequence of surface scratching or scoring, notches or point loads. These can be caused, for example, by stones or during installation. The resistance of PE high-pressure pipe materials to slow crack propagation is then the first consideration in a durability assessment. New materials with enhanced resistance to stress cracking necessitate careful selection of the most suitable test and inspection methods and parameters if reliable information is to be obtained.