EXTENDED THE REMAINING LIFE FOR TWO PIPES IN CREEP CONDITION

PASCA Niculai, MURARIU Alin Constantin, DUMA Iuliana

University Politehnica of Timisoara, Timisoara, Romania, EU

Abstract

The paper presents the extended life for two pipes from 13CrMo4-4 thermo mechanical steel after 280000 operating hours at 480°C. These pipes operate in creep condition at 480°C with pressurized steam inside. An experimental program for material creep strength behavior was developed. A number of 20 specimens for each pipe were tested in creep condition. The macroscopic aspects of specimens tested show the specifically creep aspects. Using Larson Miller, Minimum Commitment and Orr Sherby Dorn the results extrapolation was performed. The results obtained from experiments were used for remaining life extension. After these testing and evaluation the pipes remaining life were extended.

Keywords: extended life, creep behavior, 13CrMo4-4 steel

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