

DURABILITY OF THICK-WALLED PIPE FILLED  
WITH CORROSIVE MEDIUM SUBJECT TO  
DAMAGEABILITY OF MATERIAL OF PIPE AND  
RETAINED STRENGTH

Abstract

*In the paper we investigate the process of diffused failure of thick-walled pipe with corrosive filler forming the uniform pressure on inner boundary of the pipe. It's accepted that the influence of corrosive medium manifests itself only on at the limit of instantaneous strength. Integral operator of hereditary type describes the damageability process. The problem is solved with respect to retained strength of material of the pipe beyond failure front. The numerical analysis is led and the curves of motion of failure front depending on the concentration of distribution of corrosive medium and measure of retained strength beyond failure front are constructed.*