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GLUE-CONCRETE INTERFACE OF BONDED ANCHOR

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1 INTRODUCTION

This paper considers the practical application of nonlinear models in the analysis of an anchor bolt additionally placed in a concrete specimen. The model also considers epoxy surface. The results of analyses performed using the concrete model of specialized Atena 2D and Atena 3D finite element code are presented and discussed. The mesh density and convergence stability are compared in single anchor case study. All model results are compared with experimentally obtained data. There are also experiments focused on bond stress presented which are very important for verification of model assessment.
The article is focused on problems of post-installed steel bonded anchors real behaviour. Experiments and numerical models described in this paper are focused on problems of bond stress quality, on anchor joint loaded by tension force. There are progress and configuration of each experiment described.