Residual Strength of Corrosion -Damaged Reinforced

Deskripsi Lengkap: https://lib.ui.ac.id/detail?id=20435542&lokasi=lokal

Abstrak

In this work, an effort has been made to first observe the effect of reinforcement corrosion on flexural behavior of reinforced concrete beams and the to develop a model based on the test data to predict their residual flexural strength. Test data were gathered from the testing of 56 reinforced concrete beam specimens that were subjected to a varying degree of accelerated corrosion . It has been observed that the product of corrosion current density and corrosion period I corr T is the most significant factor affecting the flexural strength of a corroded beam . Based of the experimental data, a two step approach is proposed to predict the residual flexural strength of a corroded beam. First, the flexural strength is calculated using the reduced area of corroded bars, and then this value is multiplied by a correction factor that is formulated through a regression analysis of test data to take into account bond, slip, and other applicable factors.