Kajian perilaku sambungan kunci geser ferro cast ductile dengan perekat akibat beban vertikal = Study of ferro cast ductile epoxied shear key subjected to vertical load

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Abstrak

Pada jembatan segmental sambungan antar segmen membutuhkan kunci geser. Penelitian ini dibahas untuk mengetahui perilaku sambungan kunci geser ferro cast ductile (FCD) dengan epoksi. Hasil pemodelan tipe 1 menunjukan bahwa beban potensi retak beton akan meningkat jika kombinasi mutu beton dan FCD semakin tinggi, gaya prategang semakin besar, dan jumlah shear key semakin banyak; akan tetapi, semakin turun jika epoksi semakin tebal. Sedangkan pemodelan tipe 2, hasil force control hubungan tegangan utama serta tegangan geser dengan perpindahan setelah fase linier akan meningkat; akan tetapi pada hasil displacement control menunjukkan adanya penurunan tegangan utama serta tegangan geser setelah mencapai tegangan tertinggi.

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On segmental bridges connection for each segment need shear key. This study purposed to observe the behavior of ferro cast ductile (FCD) epoxied shear key. The results of this study on modelling type 1 is the potential crack of concrete would be increased if the combination of the quality of concrete and FCD were higher, prestressing forces were greater, and the number of shear key were increased but potential crack of concrete would be decreased if the thickness of the epoxy were increased. While model of type 2, for force control relationship of maximum principal stress and shear stress with vertical displacement would be increased after linear phase but for displacement control decreased after maximum principal stress and shear stress reached the highest stress.