Kajian sambungan kunci geser tunggal dengan perekat akibat beban vertikal = Study of epoxied single shear key subjected to vertical load / Reisyah Agam Kamil

---

Abstrak

[Sambungan kunci geser (shear key) merupakan sambungan berbentuk gerigi yang terdapat pada pertemuan antar segmen pada jembatan beton segmental. Shear key berfungsi untuk mengunci gelagar-gelagar pada jembatan segmental untuk kemudahan konstruksi. Gerigi pada shear key bisa berupa tunggal dan biasanya diberikan lapisan perekat epoxy pada antar muka segmen jembatan. Kajian ini bertujuan untuk mendapatkan gambaran besar beban yang terkait dengan potensi retak dari berbagai variasi shear key dengan simulasi numerik. Variasi shear key tersebut meliputi tinggi gerigi, lebar gerigi, dan tebal epoxy. Sebelum memodelkan variasi shear key, dilakukan validasi model berdasarkan eksperimen rujukan terdahulu. Hasil simulasi menunjukkan bahwa untuk variasi tinggi dan lebar gerigi, sudut gerigi 45o menghasilkan beban potensi retak terbesar; dan semakin tebal epoxy, semakin rendah beban potensi retak tersebut.;Shear key is a joint resembling a key that is located on the ends of a span of concrete segmental bridge. The function of shear key is to lock the segments of a bridge for the ease of construction. The key can be a single key and usually is given epoxy bonding agent on the interface of the bridge segments. The purpose of the study is to obtain the load related to potential crack from the variations of shear key by numerical simulation. The variations of shear key include the height of key, the width of key, and thickness of epoxy. Before modeling the variations of shear key, model validation is performed based on past experimental study. The result of the study shows that for the variations of the height and width of shear key, the key with 45o angle produces the maximum load related to potential crack; and the thicker the epoxy, the lower the load related to potential crack., Shear key is a joint resembling a key that is located on the ends of a span of concrete segmental bridge. The function of shear key is to lock the segments of a bridge for the ease of construction. The key can be a single key and usually is given epoxy bonding agent on the interface of the bridge segments. The purpose of the study is to obtain the load related to potential crack from the variations of shear key by numerical simulation. The variations of shear key include the height of key, the width of key, and thickness of epoxy. Before modeling the variations of shear key, model validation is performed based on past experimental study. The result of the study shows that for the variations of the height and width of shear key, the key with 45o angle produces the maximum load related to potential crack; and the thicker the epoxy, the lower the load related to potential crack.]