عنوان فارسی مقاله:
اثرات چسبندگی در لوله‌های کوتاه مستطیلی از جنس GFRP پر شده با بت

عنوان انگلیسی مقاله:
Effects of bonding in short-span rectangular concrete filled GFRP tubes

توجه!
این فایل تنها قسمتی از ترجمه می‌باشد. برای تهیه مقاله ترجمه شده کامل با فرمت ورد (قابل ویرایش) همراه با نسخه انگلیسی مقاله، اینجا کلیک می‌شود.
5. Conclusions

Although all of the concrete-filled tube configurations showed significant increase in strength and stiffness in comparison to the empty tubes, the degree of composite action was highly dependent on the level of concrete-to-tube bonding. The unbonded configuration (B) showed a large increase in strength over the unfilled tubes but showed only a slight increase in stiffness due to the slipping between the concrete core and tube at relatively low loads. Bonded configurations (C, D, and E) all showed significant increases in stiffness over the unbonded configuration (B) although configuration C (web bonding) only showed a slight increase in strength due to web debonding at low loads. Configurations D (flange bonding) and E (flange and web bonding) showed similar strength and stiffness results with configuration E being slightly higher than D due to web bonding. The results have shown that bonding of the concrete core with the GFRP tube increases the strength and stiffness of concrete filled GFRP beams up to twice that of unbonded concrete filled GFRP beams. In addition it is concluded that flange bonding is most critical with web bonding only offering a slight increase in performance.