

Experimental study of cast-in-situ concrete composite beam with wire mesh permanent formwork

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Abstract:

In this paper, through the combination of wire mesh panel and glass fiber reinforced cement (GRC), a kind of permanent formwork was made for the reinforced concrete beam, which can be kept in place after the construction is set, and then poured normal concrete on the precast permanent formwork to making a mixed structure component. The mechanics properties and produce process of the new component were introduced. The behavior of different component ratio were tested and compared with the normal concrete beam in the bending test. In the meantime, the bonding effect before and after the specific treatment was analyzed. The study indicates that the bearing capacity of WCL specimen is less than CL specimen by 6%, and the formwork and concrete is separated easily under a certain loading value.

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