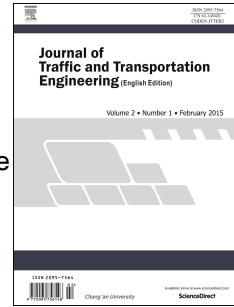


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Relationship between compressive and tensile strengths of roller-compacted concrete

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1 Original research paper

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# Relationship between compressive and 4 tensile strengths of roller-compacted 5 concrete

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## 12 **Highlights**

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• The relationship between compressive and flexural strengths as well as the relationship between  
14 compressive and splitting tensile strengths are compared to those of conventional concrete.

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• For the given compressive strength, roller-compacted concrete (RCC) has similar flexural strength  
16 compared to that of conventional concrete.

17

• For the given compressive strength, RCC has lower splitting tensile strength compared to that of  
18 conventional concrete.

19

## 20 **Abstract**

21

The abstract roller-compacted concrete (RCC) is a zero slump concrete comprising the same materials  
22 as that of conventional concrete with different proportions. The RCC must be compacted to reach its  
23 final form. The effects of hydration and aggregate interlock on its strength are considerable. For similar  
24 binder contents, the compressive strength of the RCC is generally higher than that of the conventional

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