

## **Flexural Strength of Alkali Resistant Glass Textile Reinforced Concrete Beam with Prestressing**

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**Abstract :** Due to the aging of bridges, increasing of maintenance costs and decreasing of structural safety is occurred. The steel corrosion of reinforced concrete bridge is the most common problem and this phenomenon is accelerating due to abnormal weather and increasing CO<sub>2</sub> concentration due to climate change. To solve these problems, composite members using textile have been studied. A textile reinforced concrete can reduce carbon emissions by reduced concrete and without steel bars, so a lot of structural behavior studies are needed. Therefore, in this study, textile reinforced concrete beam was made and flexural test was performed. Also, the change of flexural strength according to the prestressing was conducted. As a result, flexural strength of TRC with prestressing was increased compared and flexural behavior was shown as reinforced concrete.

**Keywords :** AR-glass, flexural strength, prestressing, textile reinforced concrete

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