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UNIVERSITI
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Cawangan Pulau Pinang
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PUSAT PENGAJIAN KEJURUTERAAN AWAM
UNIVERSITI TEKNOLOGI MARA
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The 2nd Repair and Retrofit Reinforced Concrete Beam (3RCB) Workshop 2024 : See the defect

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The 2nd Repair and Retrofit Reinforced Concrete Beam (3RCB) Workshop 2024 was organised by Pengajian Kejuruteraan Awam, Universiti Teknologi MARA (UiTM) Cawangan, Pulau Pinang, in Jun 2024. The workshop aims to provide insight into the repair and retrofit of reinforced concrete (RC) structure, particularly beams. This workshop also involved the industry by having a sharing session from Encik Hussin Mohammad from Jambatan Kedua Sdn. Bhd. (JKSB) as the industrial speaker. Encik Hussin shared his on-site experiences on the current repair and retrofit technique particularly for bridge structures that is exposed to the salted water. He also detailed out about choosing the correct technique considering the economic factors as well.

In this workshop, reinforced concrete beams were prepared in order to educate the students on the strength capacity and the performance of the beams, with and without defects. The strength test using the 1000 kN reaction frame was carried out to allow the students to experience and understand on the behaviour of a defected RC beam in comparison to a normal RC beam. Earlier, the students prepared the pre-cracked RC beam and chose the best retrofit technique to improve the capacity of the pre-cracked RC beam. The comparisons were made and tabulated in complete report. To summarise, the workshop was a success, and this 3RCB workshop should be continued in the future to enhance their knowledge beyond the university classroom.



Figure 1 : Defected RC Beam



Figure 2 : Normal RC beam



Figure 3 : Retrofitted RC beam with CFRP



Figure 4: The organisers, speaker and participants