Reinforced Concrete (RC) Compressive Test and Cracking Prediction

RC structures deteriorate overtime as their conditions and level of services are affected by various factors (e.g. loadings, temperature, working environments). Particularly, some typical RC structures in maritime settings (e.g. ports, jetties) need special attention and require regular auditing with tests to estimate deterioration process and to determine appropriate preventive intervention strategies.

Our team utilizes a combination of Non-Destructive Tests (e.g. Rebound Hammer, Ultrasonic Pulse Velocity, Core Extraction and Compressive Strength Test, Chloride Penetration) for specific sites to collect data and then use frontier modelling technique (e.g. Fick’s Second Law of Diffusion or stochastic models) to predict the deterioration. A complete Life Cycle Cost will then be formulated based on proposed intervention strategies

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