

Health Monitoring of Concrete Assets in Refinery

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Abstract : Most of the important structures in refinery complex are RCC Structures for which in-depth structural monitoring and inspection is required for incessant service. Reinforced concrete structures can be under threat from a combination of insidious challenges due to environmental conditions, including temperature and humidity that lead to accelerated deterioration mechanisms like carbonation, as well as marine exposure, above and below ground structures can experience ingress from aggressive ground waters carrying chlorides and sulphates leading to unexpected deterioration that threaten the integrity of a vital structural asset. By application of health monitoring techniques like corrosion monitoring with help of sensor probes, visual inspection of high rise structures with help of drones, it is possible to establish an early warning at the onset of these destructive processes.

Keywords : concrete structures, corrosion sensors, drones, health monitoring

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