

RENEWWRAP®

Carbon Fiber Reinforced Polymer



CASE STUDY:

UK Refinery

SUMMARY

- Concrete plinth at UK refinery, which supports a larger tank, was showing signs of deterioration
- Structural Analysis carried out and GeoTree's RenewWrap CFRP structural strengthening system was recommended
- Team of three operators took four days to complete the install

BENEFITS

- No system shut down required, Installation took place around usual day-to-day work
- RenewWrap restores infrastructure to better-than-new condition

ISSUE

At a UK refinery, a large liquid-holding tank with a potential weight of 61,371 kg sits atop two concrete plinths.

The plinths, which were constructed in a 'T' shape are approximately three meters high, 2.3 meters wide at the top and have a depth of 38cm.

One of the plinths was showing signs of severe deterioration, including 2mm wide cracking and spalling, due to weathering, aging and load fluctuations. If left to continue deteriorating, there was a real danger that the plinth would eventually fail.

Engineers at the refinery turned to CSNRI for assistance.

SOLUTION

CSNRI engineers carried out a full structural analysis of the plinth to ensure any provided solution would deliver the required result of repairing and bolstering the existing structure.

They decided that GeoTree Solutions' RenewWrap CFRP structural strengthening system would be the ideal solution. RenewWrap is engineered to strengthen ceilings, columns, walls, piers, and most other structural members of bridges, buildings, parking decks, and other facilities and structures to extend their useful life. It is designed to restore strength to deteriorated and compromised structures, as well as improve overall structural performance.

After delivering a full analysis and recommendations to the refinery a decision was made to install the RenewWrap system.

PROJECT DETAILS

Location: UK Refinery

Application: Concrete plinth Strengthening

Installation: September 2021

Installer: CSNRI



Severe cracking to concrete plinth



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STRUCTURAL STRENGTHENING

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COMPLETED RENEWWRAP CFRP INSTALL



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Before using any GeoTree product, the user must review the most recent version of the product's technical data sheet, safety data sheet and other applicable documents, available at www.geotreesolutions.com or by calling +1.855.655.6750.

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