

Gorgon Project

Case study

Focus product: Intercrete® 4841

Location: Barrow Island, Australia

Client: Chevron Australia Pty Ltd on behalf of Gorgon Joint Venture

Contractor: Civmec Limited

Summary: Enhancement of concrete cover on reinforced concrete caissons



Background

The Gorgon Project is one of the world's largest natural gas projects. It involves the development of the Gorgon and Jansz-Lo gas fields about 80 miles off the coast of Western Australia and includes the construction of a huge Liquefied Natural Gas (LNG) plant on Barrow Island, as well as a domestic gas plant with the capacity to provide 300 terajoules per day to supply gas to Western Australia.

The complexity and scale of Gorgon is unprecedented and signifies a dramatic advancement in engineering. The project is being developed by the Gorgon Joint Venture, which consists of Australian subsidiaries of three international energy companies, of which Chevron Australia is the major shareholder and project operator. During construction of the LNG plant, the engineers sought to enhance the effective cover on concrete caissons that form the base of the heavy lift Material Offloading Facility.

The solution

Intercrete 4841, a highly advanced, waterborne cementitious modified polymer coating, was chosen for this prestigious project due to its proven ability to provide reinstatement of effective cover on reinforced concrete, enhancing durability to achieve specified design life. Intercrete 4841 protects concrete from the damaging effects of acid gases, moisture, chlorides and chemicals. As Barrow Island is a 'Class A Nature Reserve', it was important that all products provided were environmentally friendly and this could be assured with Cementitious Coating Intercrete 4841 as it is water-based with ultra-low VOC levels. International accreditation of materials was also important and this could be demonstrated with Intercrete 4841's British Board of Agrément (BBA) approval and certification to EN 1504, the pan European standard for concrete repair. The works were carried out under rigorous quality controls by staff trained on-site by Intercrete authorised representatives.