

HAY POINT HPX 3

Stage 3 of the Hay Point coal port expansion by BMA is a \$2.5 billion project involving vast earthworks, reclamation, new structures on and off shore and mechanical systems fit-out. On fast-track jobs this size, it's impossible for every detail of the engineering design to be carried out to the final detail before works start on site. And plans change along the way.

McConnell Dowell Geo Sea Joint Venture (MDGS-JV) encountered two such problems during their project involvement at Hay Point: Complex suspended offshore scaffolding and suspended reinforced concrete slabs for placement in offshore transfer towers. Matt Posthumus, FIELD's senior civil/structural man and his team were able to help.

The analysis of the scaffold structures, including a partially suspended 85 tonne, 30 meter high x 134 lineal meter tower, was challenging. By liaising closely with the scaffolding crew, FIELD was able to ensure that the scaffold designs were compliant with all OHS and deck loading requirements, able to withstand the very high wind loads expected in a tropical coastal area, and easy to install out over the water.

FIELD assisted MDGS with various precast and composite concrete slab designs that reduced scaffolding and formwork requirements, and the risks of carrying out concrete pours over water.

Some of the flooring in the offshore transfer towers are composite with the structural steel framework of the towers and are constructed of precast reinforced concrete panels placed on the framework, followed by in-situ cast reinforced topping concrete. FIELD produced detailed design drawings for the system to be constructed without clashing with the previously installed steel.

In other off shore towers, to avoid substantial risks and complex logistics associated with in-situ poured floors over water, MDGS-JV and FIELD investigated the feasibility of precasting the flooring of the offshore towers as separate panels and then placing these panels on the structural steel frames. FIELD designed a floor system comprised of two layers of pre-cast panels to replace the need for any concrete pours over water in that area.

Improved work front access, intricate detailed slab design to tie in with existing steelwork, and revised flooring designs to make installation easier are just some of the things we've done to help MDGS-JV at Hay Point.

< Heavy Duty Apron Slab Design

Project Gallery

