

PROJECT SHEET

Sulphur Handling System for Petronas RAPID Project

DemcoTECH Engineering delivered a complex EPC contract, awarded by the SYS & McConnel Dowell joint venture (SMJV), for the Sulphur Handling System for the refinery and petrochemical integrated development (RAPID) project and other associated facilities in Pengerang, Southern Johor, Malaysia. The main objective of the sulphur handling system is to serve export requirements of solid products for the overall RAPID facility.

The RAPID project is being developed by Malaysian oil and gas company Petroliaam Nasional Berhad (Petronas), through a project called Pengerang Integrated Complex (PIC). Southern Johor was chosen as the location for the project due to its proximity to deepwater port facilities and regional demand centres. The location enables easy transport of finished products to the market.

The contract awarded to DemcoTECH covered design and engineering, procuring, fabrication, shipment, construction and commissioning of a granular sulphur handling system, which had stringent environmental regulations that had to be adhered to. The contract brief called for a materials handling system to offload sulphur prills delivered by tip trucks, to stack the material onto a 30 000 tonne capacity stockyard and then to innovatively reclaim and export the sulphur in an environmentally friendly manner, via a series of conveyors into the 15 000 DWT vessels. Considering the stringent environmental regulations, DemcoTECH designed advanced features into the sulphur handling system, including a 2.2 km long pipe conveyor system, enabling optimization of the system in order to reduce the number of transfer points and enhancing the plant significantly for the client.

While the project posed various risks such as language barriers, monsoon weather conditions and inclement weather patterns, a major risk to the engineering phase was sourcing the correct structural members in the region to suit the structural design. The range of hot-rolled steel members available to Malaysian steel fabricators is constantly changing, necessitating regular alterations to the structural designs by Ritchie Midgley and structural detailers KRU. DemcoTECH successfully resolved these difficulties associated with executing a project in South East Asia.

DemcoTECH has a well-established track record in Southern Africa executing projects in similar challenging, even high altitude environments such as at Liqhobong and Letšeng Diamond Mines in Lesotho. Contracted first in 2008 for the tailings disposal system at Letšeng Diamond Mine, DemcoTECH has continued to service these mine's tailings disposal systems.

DemcoTECH has developed numerous materials handling solutions which we offer to our Clients. These including innovative moveable conveyor modules, skid-mounted conveyor head-and-tail stations, wheel-mounted equipment and AeroConveyor™ technology.

While DemcoTECH is a local South African based operation, it has also seen considerably success internationally. It was awarded the RAPID contract for the sulphur handling system in Malaysia following the successful completion of other offshore work; this includes the detailed design for an import terminal at Port of Ploce in Croatia which conveys both iron ore and coal. The design of a multimillion-dollar 200MTPA iron ore import / blending / export Terminal in Lumut, Perak, Malaysia for Brazilian major mining group Vale. The design of 5000tph a brownfield coal import system from ship unloader through to the stockyard of a power plant in Malaysia.

DemcoTECH Engineering is a specialist bulk materials handling and niche process plant company, offering services from concept design through to project completion to the power generation, cement, mining, metallurgical, manufacturing and port handling industries. Services include conceptual design, feasibility studies, design, engineering, procurement, expediting, construction and commissioning. Plant supplied by DemcoTECH includes troughed conveyors, air-supported conveyors, pipe conveyors, rail-mounted slewing boom stackers, pivot boom conveyors and mobile conveyors.



Client	Petronas
Commodity	Sulphur
Contract Type	EPC
Duration	27 months
Location	Johor, Malaysia

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