Huntsman - Singapore

Dual Sided Multi-Modal and Loading Arms

2006

This project was awarded to Loadtec by Jacobs Engineering in Singapore. JEL constructed the Greenfield site on Jurong Island during 2006/7.

The bay is double sided and the tankers park on weighbridges. Huntsman has a wide variety of trailers visiting the bay for both loading and unloading. The object was to provide an access solution, which could meet all the tanker heights and allow them to park in the same place every time for weighing accuracy. An added complication was the need to load up to eight different liquids in each bay.

Loadtec proposed a Carbis dual sided Multi-Modal access system. This is a vertically elevating platform with flip-up floor panels that allows operators to walk freely and safely on top of the tanker anywhere along it's length.

Loadtec further proposed a dual sided manifold arrangement, which gave simple yet effective liquid selection to the operators. The manifold is positioned at a higher level than the access platform to allow adequate drainage down to the tanker. Each side of the manifold was piped into the inlet of an Emco Wheaton E2630 style Vapour recovery loading arm. The Loading Arm is designed to reach the whole length of the tanker top for versatile and flexible usage.

To minimise obstructions on the loading bay, the column supports for the Multi-Modals are positioned on the far side of each bay and allow the arms to travel without risk of collision.

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Tanker Loading Arms & Multi-Modal Access

Loadtec also supplied the Tanker Earthing system which is linked to the site DCS and Loading Arm control system. The Loading Arm can only be used when it has met a strict set of safety permissives and proved it's operating position and safe status. The Earthing System is one of those permissives

The Multi-Modals are powered by an air driven hydraulic pump. This drives the cylinders up and down as necessary to provide 1.5 metre vertical range. Limit switches on the underside of the Modal platforms stop the downward travel when the tanker is detected to prevent damage prevent interference with the accuracy of the weighbridge.

Each Multi-Product Emco Wheaton loading arm is positioned so that it parks off the platform and has a drainage tundish. The arms are pneumatically balanced and have a cone to plug the manhole during loading. The cone collects displaced vapours and sends them, via a hose which is carried and supported along the arm, to the clients vapour recovery/disposal system. By designing an arm that can handle all the liquids and ensuring it had no liquid traps when parked, Loadtec and Emco Wheaton could safely utilise the Multi-Product Manifold system. This has almost zero cross liquid contamination and saved a considerable amount of space and cost for the client.

Loadtec developed the scheme after working closely with the EPC – Jacobs Engineering and their client – Huntsman to provide a scheme that would be future proofed for safety, environmental and manual handling legislation.

If you have a loading bay that can be better utilised or are concerned about your legislative compliance, give Loadtec a call to discuss how you can improve your Tanker Loading and Unloading facilities. Loadtec can work with you anywhere in the world to provide product and package solutions that meet your technical and commercial needs.

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