

SWEATING PIPES KLCC

The world-famous Petronas Twin Towers and the surrounding city centre utilises liquefied natural gas for power generation and utilities. These gas lines are cooled by chilled water and the insulated pipe lines run underground beneath the KLCC at the Twin Towers. The diameters of these pipes ranging between 12" to 48".



Despite being a relatively new installation, the jointing flange areas of the lines, which are underground and only accessible through manholes, were suffering from high levels of corrosion through failure of the original coating in the extremely wet conditions under the insulation layers.

The high levels of



Above: 32" flange after removal of insulation.

Below: Close-up of unprepared surface.



TECHNICAL DETAILS

| | |
|----------------------|--|
| Type of Line: | Chilled water line (sweating) |
| Sizes of Flanges: | 12", 24", 32" & 42". |
| Sizes of Valves: | 3", 6" & 10". |
| Substrate Condition: | Partly corroded, flaking & damp |
| Existing coating: | Red oxide primer & single pack aluminum |
| Surface preparation: | Water jetting/hand abrading |
| Application Method: | Hand brush |
| Material used: | Alocit 28.15 Tropical Yellow & Tropical Grey |
| Coverage Rate: | Average 0.44 M ² / Kg @ 900 microns |
| DFT 28.15 T Yellow: | 400-500 microns |
| DFT 28.15 T Grey: | 400-500 microns |
| Total average DFT: | 900 microns |

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condensation which led to the corrosion also made re-coating impossible with any standard coating. The decision to use Alocit was based on its proven ability to be applied on to wet and damp surfaces.

Flange surfaces were abraded with wet & dry sandpaper after water jetting to create profile for adhesion. The surfaces were washed down after abrading to remove contamination prior to the application of the first coat of 28.15 Tropical Yellow, followed by a coat of 28.15 Tropical Grey.



Above: Flange surface after preparation.

Above right: Alocit 28.15 Tropical Yellow first coat.

Middle: Dripping wet and at risk from severe corrosion, these three inch flanges were also coated during the project.

Right: This close up of a finished flange with its second coat of 28.15 Tropical Grey, shows just how much condensation was on every surface. Coating on such wet surfaces proves, beyond doubt, Alocit's outstanding surface tolerance.

