

500 series for Ammonia Pipelines



Industry	Chemical Manufacturing
Date	2010
Substrate	Steel Substrate
Products	Chemco Epo-chem™ RS 500P Chemco Epo-chem™ RA 500M
Environment	Wet and Cold Pipelines

Challenge

The ammonia lines had been in service since the plant was built. Severe external corrosion caused holes to form in the pipe and there were no spare lines for the plant to be shutdown. Very expensive pipe sealing clamps were in use and the condition of the rest of the pipelines was deteriorating rapidly. As the pipes are constantly cold and very wet, engineers had put corrosion protection of the pipes in abeyance which was just exacerbating the problem.



Before – Ammonia Bullet Pipelines

Chemco's Solution

Moisture tolerant and Solvent-free epoxies RS 500P and RA 500M were recommended as this system requires minimum surface preparation (i.e. no dry grit blasting) and solvent-based materials were not allowed. Ideal for confined spaces.

Rain, water, condensation or high humidity has no effect on freshly painted surfaces and its environmentally friendly properties allowed work to continue throughout the Queensland Wet Season. Areas were high-pressure washed at 500bar to a WJ-4 standard. Coating was applied to an average DFT of 300µm



After – Coated Pipework

Results

This coating system is relatively new to Australia and is a prime example of innovative technology being used to save the existing plant from the possibility of catastrophic failure. Despite the extreme weather experienced in Queensland and the complex layout, the coating work was finished on time and within budget restrictions. As a result, there will be considerable savings in the cost of pipe sealing clamps in the future and plant safety has been increased exponentially.