

# SOLUBLE SALT TREATMENT – STORAGE TANKS

## INTRODUCTION

Contamination on a surface to be coated (e.g. dust, grime, oil, water), for immersion service, is detrimental because it affects adhesion.

Soluble salts are a particular problem for the following reasons.

- a. Osmotic blistering (usually in immersion) through the coating to the substrate.
- b. Hygroscopic and so attract moisture to the surface prior to painting.
- c. They react with the steel to cause corrosion.

Prior to surface preparation (abrasive grit blasting) for linings, steel surfaces should be tested for salt contamination. If measured salt levels exceed the project requirements, then corrective action is required to ensure optimum performance. Similar action should be taken in the event of flash rusting.

## USE OF SOLUBLE SALT REMOVAL TREATMENTS

Sherwin-Williams have demonstrated that chemical treatments, such as Chlor\*Rid SP8 [Gel and Rinse] and CorrZE 100 (gel) and CorrZe 200 (rinse) can be effective in the removal of soluble salts and flash rusting. It is, of course, imperative to avoid ponding of chemical treatments and rinsate water and as such it is essential that all residues are cleaned from the surface prior to any final surface preparation and subsequent lining application in strict accordance with the suppliers guidelines.

Tests have shown no difference in performance of linings and antic-corrosive systems (in normal ambient service conditions) after use and as such owners or applicators can select to use such surface treatments.

As with all lining recommendations it is important to confirm the lining specification with your local technical representative and issues such as surface profile and appearance remain important.

Alternative methods of salt removal may also be used such as:

- a. High-pressure fresh water wash (water conductivity should be less than 300µScm-1) the surface and allow to flash rust. Reblast the area to the required standard – ensuring the blast media is not chloride-contaminated. For best results use high-pressure heated deionized water.
- b. Steam clean the surface using plant steam and allow to flash rust. Complete preparation as above. It is important to continually drain the accumulated water and not allow it to pool.