



Asset Care Counts

July 2014

## Materials Durability Surveys at Plant Handover

Newly constructed plant has an expectation of excellent performance from its initial commissioning, aside from minor run in issues.

ALS Industrial has however found that sometimes these expectations are not met and significant operational problems occur upon start up or after a short period of operation that can adversely affect service life.

All too frequently, these occur as a result of the same material selection and fabrication errors we have seen repeated from one site to the next, errors that are readily avoidable.

### ALS Durability Surveys – Supporting Better Plant Life

To help asset owners ensure that their plant performs as expected, ALS Industrial performs Materials Durability Surveys of client's newly constructed plant.

These surveys are typically best completed prior to handover of the construction project to the asset owner, but can also be completed early in service / commissioning.



Figure 1: H<sub>2</sub> blistering in steel tank plate due to internal corrosion

These independent surveys allow:

- **Asset Owners** to feel confident that any material selection and/or fabrication issues that may prevent the plant achieving its design life are identified and addressed.
- **Construction companies** to ensure acceptance of the plant by the new owners and resolve disputes over plant acceptance.

ALS Industrial has the ability to provide these surveys by bringing together our expertise in:

- Root cause failure analysis
- Material selection / fitness for purpose
- Weld inspection and repair procedures
- Pressure equipment compliance assessment
- Protective coating specification and assessment;
- Condition assessment via metallurgical, non-destructive testing and conditioning monitoring methodologies.



Figure 2: Premature coating failure due to inappropriate coating specification & poor application methods



Figure 3 – Dissimilar metals in direct contact; causing accelerated corrosion damage to the less corrosion resistant alloy.

### Our Survey Results – Tailored to Your Needs

At the conclusions of our surveys, ALS can provide advice and reports tailored to the specific needs of our client. These reports can include:

- Weld and Coating repair specifications.
- Materials replacement recommendations.
- Complete coating system specifications.
- Advice on contractors accredited under the Painting Contractor Certification Program (PCCP) to the appropriate level for the intended work.
- Details of paint products approved to the Australian Paint Approval Scheme.
- On-going technical advice.
- Water chemistry advice on compliance with industry standards.

### Our Materials Engineering Team

This service is led by ALS Industrial’s Materials Engineering team with the support of our wider Asset Integrity team around Australia.

ALS Industrial has the largest team of materials engineers in Australia in addition to NATA accredited testing facilities and a wide range of inspection personnel.

For further information or to enquire about a Materials Durability Survey please contact:

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Figure 4: Alternate materials to solve an OHS corrosion issue

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