

Providing expert testing and assessments of steel and concrete structures to provide dispute resolution and solution based outcomes.



# CAPABILITY STATEMENT

## Failure Analysis

- Failure mode and effects analysis (FMEA)
- Forensic Investigation
- Expert Witness Reporting
- Dispute Resolution
- Root Cause Analysis
- Materials testing
- Laboratory analysis
- Specification for Repair

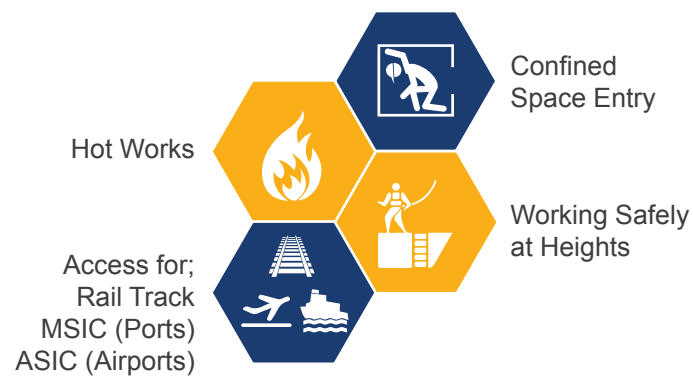











## OUR VISION, OUR PEOPLE, OUR CULTURE

The Remedy Asset Protection (RemedyAP) mission is to provide detailed assessment and inspection services in accordance with the Clients specification and applicable Standards. Our inspection staff has practical problem-solving skills and good interpersonal abilities. The team has experience evaluating many different types of structures across various industries to bring those learnings to the inspection, assessment, and resolution of your facilities.

**Where the Problem is;**  
We have staff trained to access the environment where your failures occur;



## LABORATORY METHODS EXPLAINED

- 
**Fourier transform infrared spectroscopy (FTIR)** is used for the analysis and identification of pigments in paints/coatings by identifying unique patterns in the spectrum
- 
**Scanning electron microscope (SEM)** is used to scientifically verify the composition of samples to confirm the correct and specified materials were utilised.
- 
**Energy-dispersive (EDS) detector** is used to find the chemical composition of materials down to a spot size of a few microns, and to create element maps over a much broader area.
- 
**X-Ray Mapping** – Using EDS, an element map can provide greater distinction between chemical compositions.
- 
**Elemental Profile** - Element profiles with depth are useful for displaying trends with depth.
- 
**Ash testing** - Nitrogen Assay or combustion testing is used to determine the mix ratio of amine cured epoxies and some urethanes.
- 
**Other** – many forms of infrared, chromatography and differential scanning calorimetry options.









## INTERPRETING RESULTS

Our experts can guide you through the inspection and analysis options. RemedyAP are experienced interpreting test results into causal factors through to root cause. This approach saves you confusion but also time and money in avoiding overlapping strategies on your path to a suitable outcome.

## FAILURE RESOLUTION

Our services will guide you through the many options in failure analysis to achieve a suitable outcome. These will include a combination of a few or all the following services;

- 
**Failure mode and effects analysis (FMEA)** - in many cases there is no single cause that leads to a failure. Rather, there are factors that combine at a time and place to allow a failure to occur.
- 
**Forensic Investigation** – Other elements that may not be readily acknowledged in failure analysis, yet are no less important, are common sense, a critical and unbiased mode of thinking, experience, knowledge, and experimental observation.
- 
**Dispute Resolution** – our detailed investigation and thorough reporting assists you in court however good quality information usually brings the parties together and usually quicker and cheaper than going to court.
- 
**Expert Witness Reporting** - Our specialized knowledge and skills are matched to present opinions about the facts of a case during legal proceedings.
- 
**Root Cause Analysis** - is conducted to determine the root cause for the failure and how it may be prevented in the future.
- 
**Materials testing** - measuring the characteristics and behavior of concrete and plastics using various samples and techniques.

## TEST CAPABILITIES







## ACCREDITATION

The reputation of our service is guaranteed through our Accreditations listed below;



- JAS-ANZ**
- ISO 45001 Safety
  - ISO 9001 Quality
  - ISO 14001 Environment



- Pre-Qualifications (Pending)**
- ISNetwork (Oil and Gas)
  - VicRoads (Bridge Inspection - Level 2)
  - VicRoads (Surveillance TB-48) (Pending)
  - Protective Coatings Prequalification Scheme



- NATA (Pending)**
- ISO/IEC 17020 Conformity assessment - Requirements for the operation of various types of bodies performing inspection

## AFFILIATION



Australasian Corrosion Association (ACA)



NACE International



Institute of Public Works Engineering Australia (IPWEA)



Concrete Institute of Australia (CIA)



Australian Concrete Repair Association (ACRA)

## CONSULTANCY



Tender Assessment



Financial Modelling



Subject Matter Expert



Project Alignment



Dispute Resolution



Failure Analysis



HazMat & Lead abatement



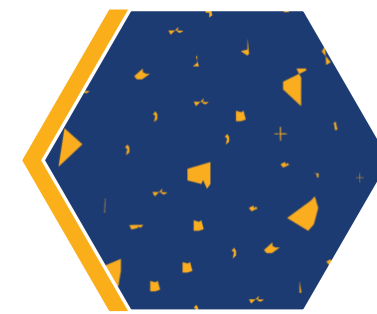
Training & Pre-qualification

## Training

Our Staff hold accreditations and are approved instructors for industry programs that include;



## MATERIAL AND NON-DESTRUCTIVE TESTING (NDT)



CONCRETE



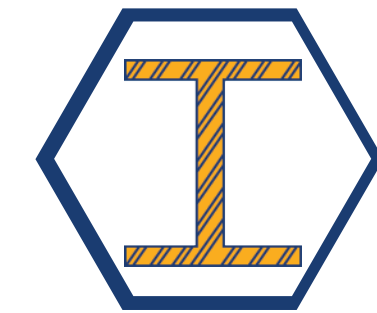
Laboratory

- Compression testing
- Sorbtivity test
- Chloride egress



Field

- pH and carbonation testing
- Depth of concrete cover
- Moisture in concrete
- Tensile strength
- Sounding



CORROSION



Laboratory

- Metalurgical Testing
- Microbial Studies
- Chemical Analysis



Field

- Ultrasonic Thickness
- Pit Depth
- Surface roughness
- Positive Metal Identification



COATING



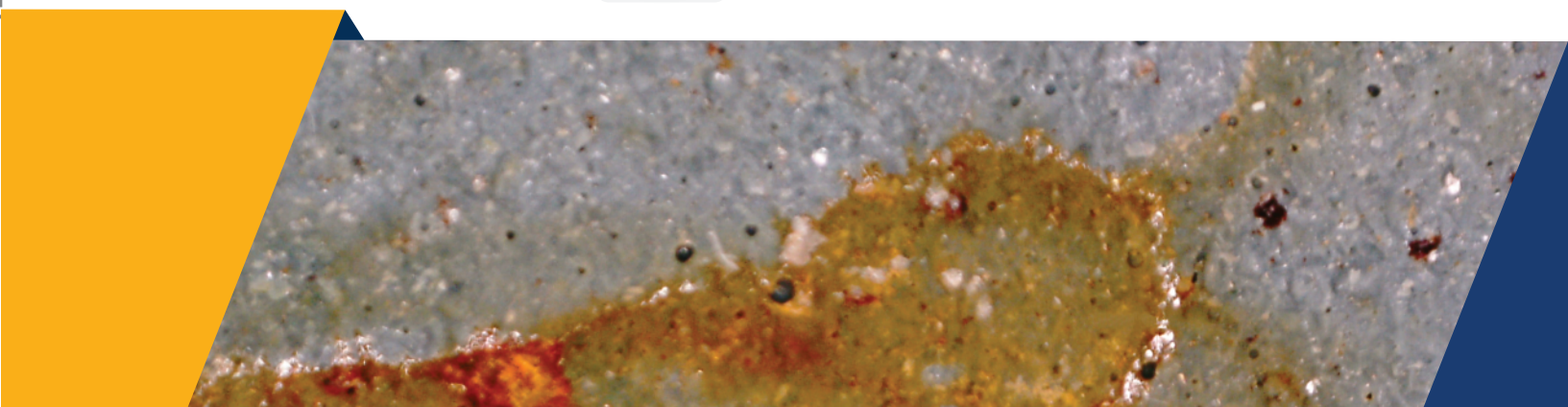
Laboratory

- Infra-red Analysis (FTIR)
- Degree of Cure by Thermal Analysis (DSC)
- Coating Filler Identification by X-ray Analysis (EDS/XRD)
- Coating Microstructure by Embedding, Polishing and Optical Microscopy (OM)
- Coating Thermal Stability and Composition by Thermogravimetric Analysis (TGA)



Field

- Dry Film Thickness
- Hardness Testing
- Porosity Testing
- Hazardous pigment Identification
- Adhesion Testing










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