



Risk Assessment  
Condition Assessment  
Materials Handling Machines  
Marine Facilities  
Specialist Structural Advice  
Structural Remediation

## STRUCTURAL REMEDIATION

Through our operational link with the industry, Hatch's Structural Assets group has developed a unique technique to audit, repair and maintain the structural assets of large industrial plant facilities. Hatch has the technical specialists to audit a complete facility and priorities structural elements in order of structural risk.

Business performance will improve using our proven techniques. Infrastructure maintenance will be streamlined once high risk structures are identified and budgets allocated to these items. Through our annual auditing program we monitor structures and implement necessary repairs. This extends the life expectancy of all structures.

Hatch's Structural Assets group provides these services to a range of industrial facilities from steelworks and heavy industry through to mining, mineral processing and marine structures.

### KEY CAPABILITIES

Hatch's Structural Assets group has developed core competencies in the following specific fields. We can provide a range of engineering services and asset management of concrete and steel structures. We tailor the service level to best embrace the needs of our clients in providing cost effective solutions.

- diagnostic investigation of concrete structures
- structural risk assessments
- prioritised structural audits and budget planning
- engineered structural solutions and documentation
- global, civil and structural audits
- diagnostic surveys
- repair solutions
- construction supervision
- concrete inspections of placing concrete
- cathodic protection

With our global audits, we conduct site inspections on all your plant's concrete and steel structures and prioritise all the facilities on the basis of their structural risk, operational security and occupational health and safety risk. Some areas of the plant may require further investigation which is known as a 'diagnostic survey'.

•With a diagnostic survey, we will collect the following data:

- Drummy survey
- Core and powder samples analysis
- Schmidt hammer testing
- Reinforcement cover and location measurements

## STRUCTURAL REMEDIATION CONTINUED

- Concrete crack monitoring
- Carbonation testing
- Chemical analysis

### CAUSES OF DAMAGE

- Environmental assessment
- Structural assessment
- Structural performance
- Plant and equipment shutdowns
- Recommendations for repair and modification

On completion of a diagnostic survey design drafting and documentation are executed using the latest computer software with 3D capabilities.

Our repair methods are cost effective and work in with plant shutdowns.

Construction supervision and concrete mix designs ensure cost effective repairs and limit future repairs due to efficient QA/QC supervision. Our construction supervision ensures that the reinforcement, framework and the concrete mix are in accordance with design drawings all of which are critical to the future life of the structure. Our repair solutions consider the following: repair existing structures to original strength.

- Analyse structures and prepare engineering solutions
- Coating systems
- Cathodic protection systems
- Durable concrete mixes
- Incorporation of additives to improve durability and mix design