



Steel Structure Asset Management Solutions

Solutions for Aging Steel Infrastructure

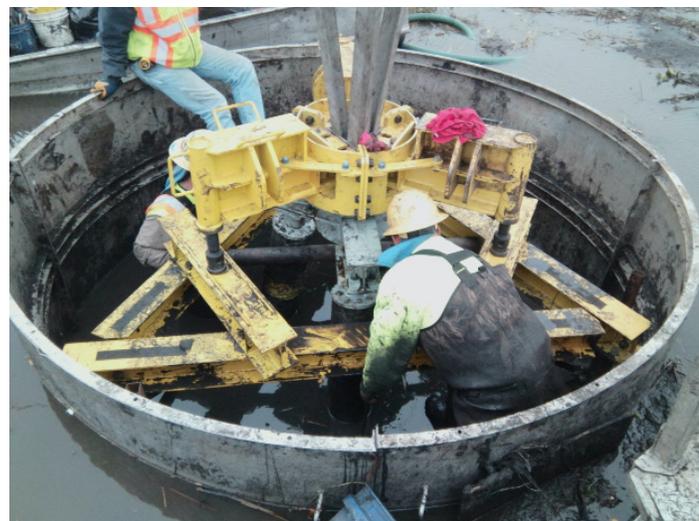
Steel towers and poles were once thought to be permanent structures, but have demonstrated that they degrade over time due to corrosion and mechanical damage.

Osmose corrosion management solutions are designed to predict, assess, restore, and prevent corrosion on steel towers, poles, substation structures, and other steel assets. Osmose partners with each utility to deploy a practical, cost-effective, and programmatic approach to provide accurate assessments, effective mitigation methods, and structural restoration solutions to:

- ✓ Extend the service life of steel towers and poles, which qualifies the program as a capital expenditure
- ✓ Improve system reliability
- ✓ Reduce emergency and unscheduled O&M costs
- ✓ Prevent risk and cost of failure or premature replacement of structures
- ✓ Avoid service interruptions
- ✓ Lower ratepayer costs by reducing structure replacements

Osmose utilizes proprietary technologies and a highly-skilled workforce to extend the life of a utility's steel structures through the most cost-effective methods. These methods include:

- Steel assessment
- Concrete assessment
- Comprehensive overhead, groundline, and below-grade assessment
- Coatings and cathodic protection
- Engineered restoration design and installation



Structural Evaluation & Analysis

With over two decades of experience, Osmose has developed engineering techniques that utilize specialized instrumentation to perform predictive health risk assessments and assessment methodologies specific to steel structures and concrete foundations. These include:

- ✓ Ultrasonic thickness measurements
- ✓ Windsor probing
- ✓ Borescope evaluation for blind surfaces
- ✓ Site environmental evaluation for corrosion potential
- ✓ Non-destructive evaluation (NDE) of concrete, steel structures, and anchors



Corrosion Risk Modeling

Using Osmolytics® an application which leverages environmental databases and data from over 125,000 steel structure inspections, structure owners can also obtain valuable predictive modeling results designed to aid in the decision-making process.

Restoration Design & Installation

Osmose provides turnkey solutions for damaged and deteriorating steel structures at a fraction of what total replacement would cost. Whether the structure is directly-buried, on concrete foundations, or in water, Osmose restoration designs are built to restore strength and increase capacity if greater strength is required.



Life Extension with Cathodic Protection & Coatings

The application of corrosion mitigation, such as protective coatings and cathodic protection, can greatly extend the useful service life of steel structures. Osmose provides turnkey mitigation design and installation for multiple types of transmission structures and environmental conditions. For example:



- ✓ Application of coatings below-grade is the primary method of protection for the majority of buried steel structures
- ✓ Cathodic protection systems are used as a secondary form of mitigation by attaching sacrificial anodes to steel structures and placing them in the same soil, relocating the corrosion activity from the structure to the anode, ultimately providing an additional layer of corrosion mitigation

To contact your local Osmose professional, call 770.631.6995 or email steel@osmose.com.