

ASTM G31 FIELD CORROSION EXPOSURE REPORT

CoilSafe® – 26,200 Hour Sea Water Submersion Exposure Test — Galveston Island, Texas

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|-----------|----------------------|--------------|------------------------|
| Product: | CoilSafe® Coating | Standard: | ASTM G31 |
| Duration: | 26,200 hrs. | Environment: | Sea Water Submersion |
| Location: | Galveston Island, TX | Coating: | 8-micron covalent film |

1. Scope

ASTM G31- Sea Water exposure evaluation of CoilSafe® coated metal submerged 3 meters below sea water.

2. Test Apparatus & Materials

Three metal samples; aluminum, galvanized and stainless steel evaluated: CoilSafe® (8-micron covalent film) coated. Each metal sample was half coated and half not coated and submerged.

3. Exposure Conditions

Continuously submerged and exposed to chloride ion, water borne aggregates, and tidal flows of sea water effects in true oceanfront site. Seasonal temperature cycling of water and metal samples.

4. Results Summary

| Parameter | CoilSafe® | Uncoated |
|------------------|-------------------|-------------------|
| Corrosion | None | Severe |
| Pitting | None | Heavy |
| Microbial growth | Slight | Severely Degraded |
| Bonding | Covalent adhesion | N/A |

5. Visual Documentation

Stainless Steel



Uncoated

Coated

Galvanized



Uncoated

Coated

Aluminum Tube Stock



Uncoated

Coated

6. Conclusion

After 26,20000 hours of natural Sea Water submersion exposure, CoilSafe® exhibited complete corrosion resistance, while the uncoated sections of the samples showed extensive deterioration consistent with chloride-driven corrosion. Testing verified by CZI labs.