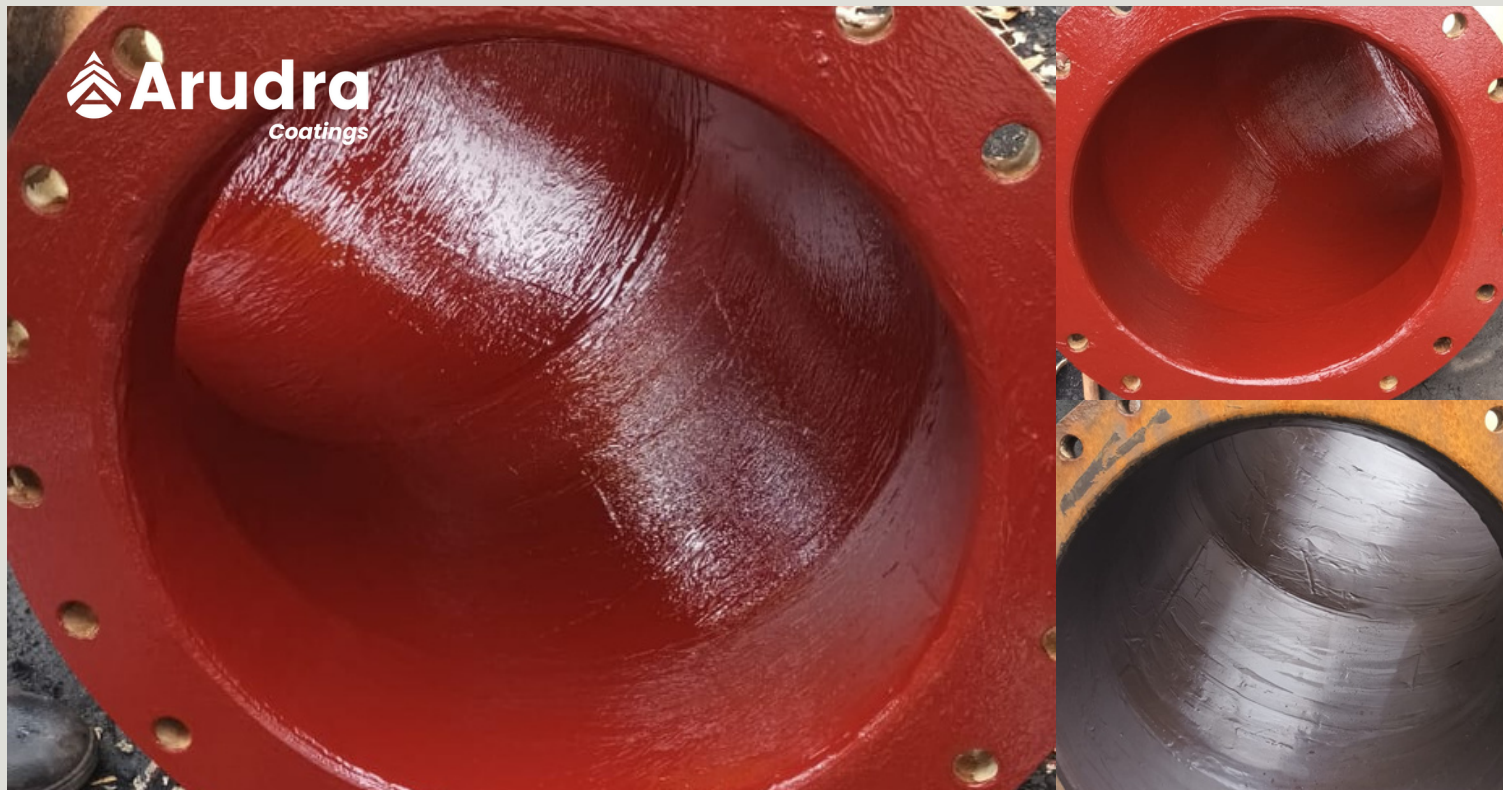




Sea Water Intake Pipeline Spools Rebuilt and Protected with Duromar® HPL-2131 & Duromar® HPL-2510

Case Study

Scope of Work

A leading coastal power plant was facing severe internal corrosion and wall thinning in their Circulating Water Cooling (CWC) pipelines, leading to frequent leaks, downtime, and high maintenance costs. The plant required a long-lasting, corrosion-resistant coating to protect against continuous seawater immersion and extend pipeline life without full replacement.

Solution

To address the dual challenges of structural degradation and corrosion in the seawater intake spools, Arudra Engineers implemented a two-pronged rehabilitation strategy. The first phase focused on restoring the structural integrity of the damaged pipeline using a high-strength rebuilding compound to fill pitting and erosion losses. The second phase involved applying a high-performance protective coating to safeguard the internal surfaces from future corrosion, chemical attack, and abrasion due to saltwater flow.

Product

Duromar® HPL-2131:

A high-performance rebuilding compound used to restore the thickness and profile of the damaged metal surfaces. It provides excellent adhesion, compressive strength, and resistance to saltwater immersion.

Duromar® HPL-2510:

A ceramic-filled, chemically resistant epoxy topcoat engineered to withstand continuous saltwater immersion, abrasion, and microbiologically induced corrosion (MIC). It provides a dense, impermeable protective barrier for extended service life.

Application Procedure

Surface Preparation

Internal surfaces were thoroughly abrasive blasted to achieve a near-white metal finish (SSPC-SP10/NACE No.2 standard), ensuring optimal surface profile and cleanliness for coating adhesion.

Rebuilding

Duromar® HPL-2131 was applied to the pitted and corroded areas. The material was shaped and leveled to restore the original dimensions and surface profile of the pipeline spools.

Topcoat Application

After the rebuilding compound was cured, Duromar® HPL-2510 was applied in uniform coats using spray and brush techniques to achieve the required thickness and complete coverage of internal surfaces.

Inspection & QA

Post-application inspections were conducted using DFT (dry film thickness) gauges and holiday detection tests to ensure complete coverage and coating integrity.

KEY FEATURES



High-Strength
Rebuilding



Superior Corrosion
Resistance



Cost-Effective
Alternative to
Replacement



Enhanced
Equipment Life



Minimal
Downtime



Heavy-Duty
Protection



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