

SL WR2 WIRETHERM

India's First and Only Penetrative Synthetic Lubricant for Enhancing Wire Rope Life and Safety

Wire Rope Applications in Non-Ferrous Smelters & Tankhouses (Aluminium, Copper, Zinc)

Non-ferrous smelters run wire rope in atmospheres that are simultaneously acidic, corrosive, and hot. Tankhouse cranes work in permanent sulphuric acid mist (copper, zinc electrolytic refining); pot line and anode cranes in aluminium smelters face fluoride-rich fumes; cast house cranes face hot metal spatter. Topical grease is destroyed within weeks; WIRETHERM's corrosion-inhibited penetrative film reaches the internal wires where acid attack starts.

Part A — Annual Cost of Wire Rope Failures (Smelter + Tankhouse Complex)

- **Rope life:** tankhouse and pot line crane ropes with topical grease typically reach 35–55% of design life on internal acid/fluoride corrosion.
- **Rope spares: ₹60 lakh–1.4 cr/year per complex.** Change-out is frequent and high-cost in acid-mist environments.
- **Inspection + change-out labour: ₹20–35 lakh/year.** Tankhouse rope changes require production interruption on the cell line.
- **Production loss: ₹1.5–4 cr/year — the dominant cost.** Tankhouse crane failure halts electrowinning; pot line crane failure delays anode change and damages pot thermal balance.
- **Total: ₹2.3–5.8 cr/year per complex.** A corrosion-inhibited penetrative synthetic extends rope life 2–4× and addresses ₹90 lakh–3 cr/year. Acid-mist environments show the fastest visible payback.

Part B — Wire Rope Applications

- **Aluminium Pot Line** — anode handling crane ropes (PTM); crust breaker / ATM crane ropes.
- **Aluminium Cast House** — DC caster mould handling ropes; ingot piling crane ropes; billet saw loading ropes.
- **Aluminium Anode Plant** — baking furnace charging crane ropes; paste plant hopper handling ropes.
- **Copper Smelter** — converter aisle crane ropes; matte ladle crane ropes; slag pot car haul ropes.
- **Copper Tankhouse (Electrorefining)** — tankhouse cathode strip crane ropes; anode handling crane ropes — permanent acid mist.
- **Zinc Roasting & Leaching** — roaster charging crane ropes; leach tank maintenance rigging ropes.
- **Zinc Tankhouse (Electrowinning)** — cathode stripping machine crane ropes; cell maintenance ropes.
- **Zinc Cast House** — zinc ingot stack crane ropes; jumbo block handling ropes.
- **Raw Materials & Concentrate** — concentrate handling grab crane ropes; alumina / bauxite silo ropes.
- **Utilities & Shutdown** — TG hall and boiler ropes (captive power); shutdown rigging ropes.

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