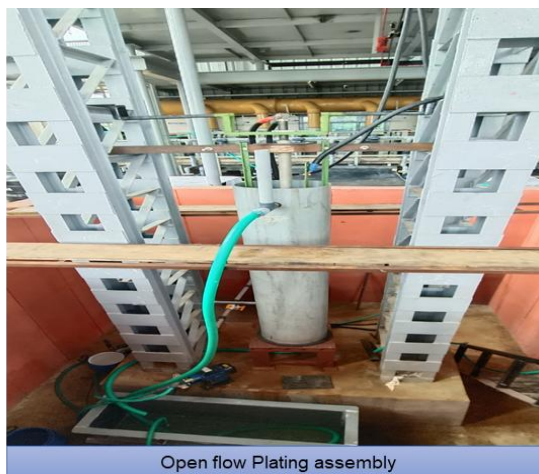
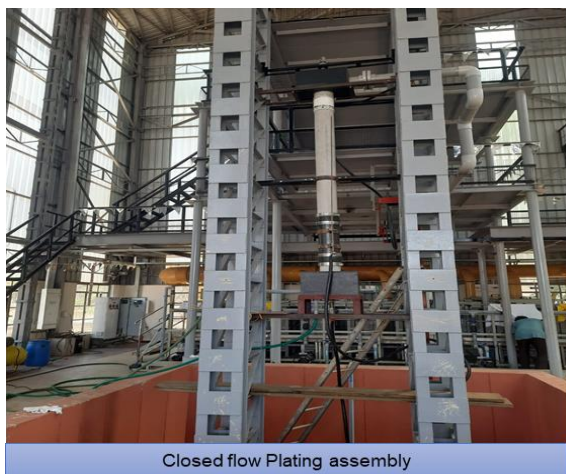


Tri-Valent Hard Chromium Plating on Inner Bore of Gun Barrel

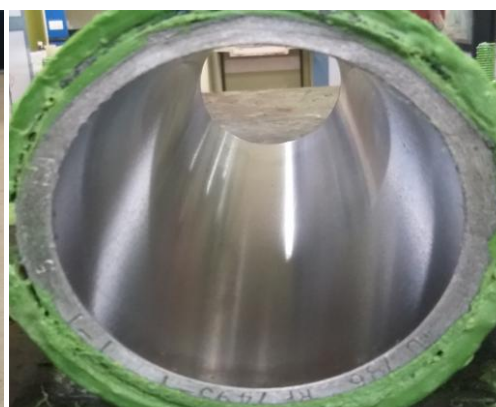
Novelty of the Technology: Environmentally friendlier tri-valent process replacing toxic hexavalent chromium



0.5 meter length
tube Substrate



0.5 meter length tube Substrate
without Chromium coating



0.5 meter length tube with Chromium
coating using trivalent chemicals

Chromium plated gun barrel tubes (0.5 meter length) using Trivalent
electrolytes

- 0.5 meter length tube Substrate.
- Nickel plating (10 micron) used as under coat for better adhesion.
- Chromium Plating (40 micron) done as top coat.
- Closed flow method vs Open flow method tested. Open flow gives better operating situations.
- Micro hardness >850HV, Wear loss < 20 mg per 10000 cycles.