

Highlights

- The Co-rich matrix phase in cast Stellite 6 corroded at its boundary with the Cr-rich carbide due to chromium depletion.
- HIPed Stellite 6 with a homogenous matrix exhibited no corrosion at the same interface type.
- In both cast and HIPed Stellite 6, the Co-rich matrix corrodes more rapidly than the carbides.
- A high carbon: chromium ratio within the Stellite 6 specification makes the alloy more prone to corrosion.