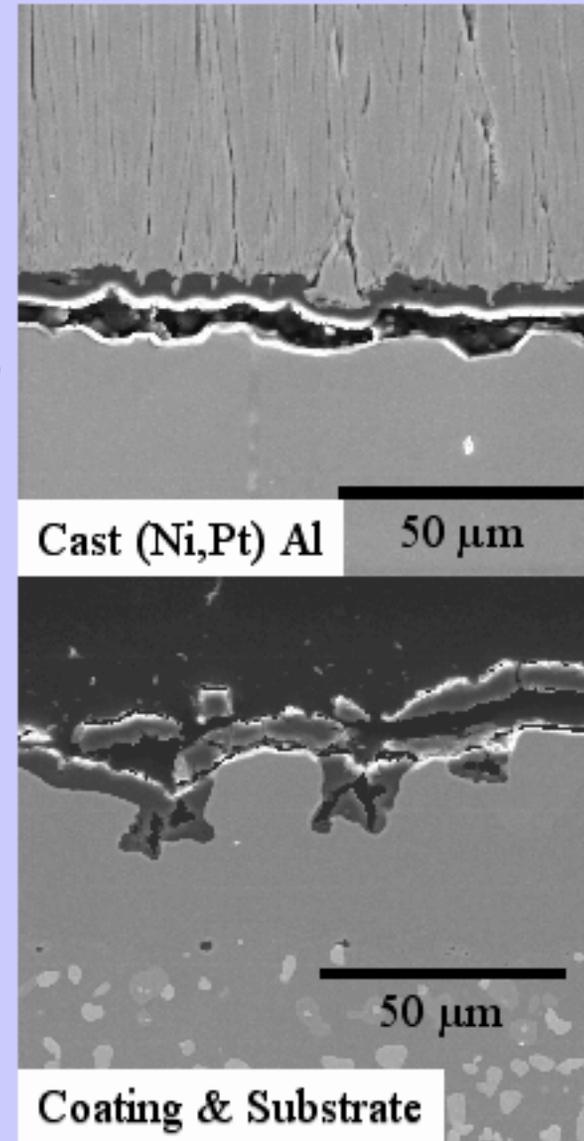
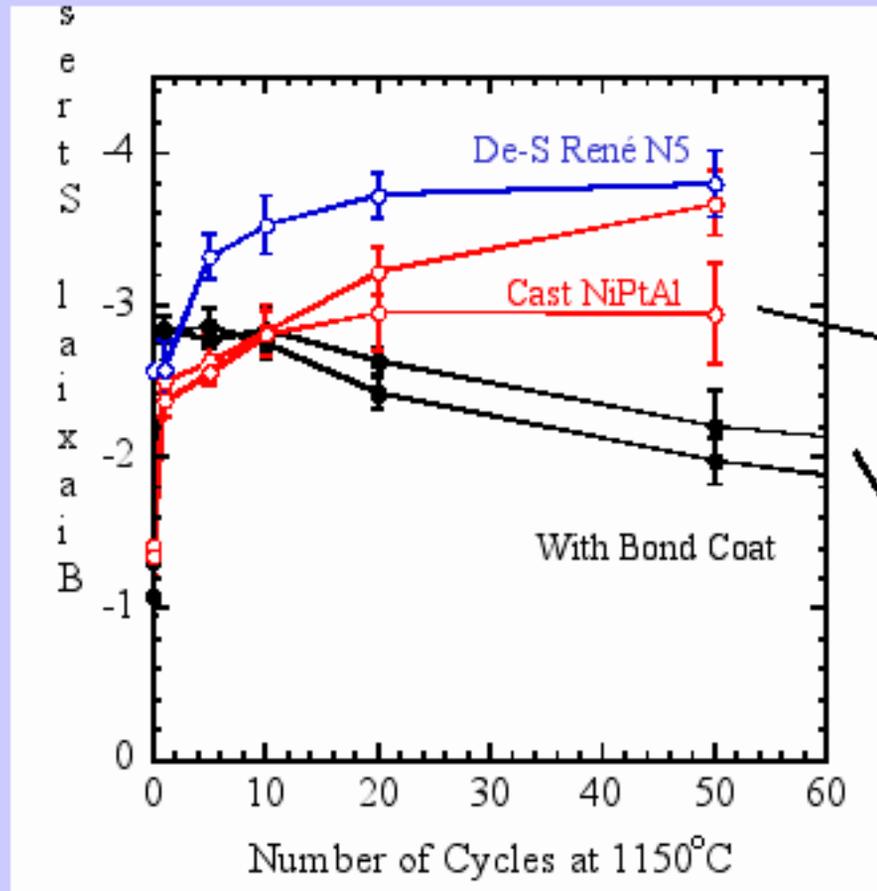


Effect of Bond Coating on Stress in Scale under TBC



- Without a bond coating, the stress in the scale increases with thermal cycling.
- TBC spallation occurs much sooner without a bond coating (before 75 cycles).
- With a bond coating, the scale is massively cracked and the interface is deformed.
- Without a bond coating, the scale is intact (even after delamination of the TBC).
- The fundamental cause of interfacial deformation and eventual spallation of the TBC is the CTE mismatch between the substrate and the bond coating.