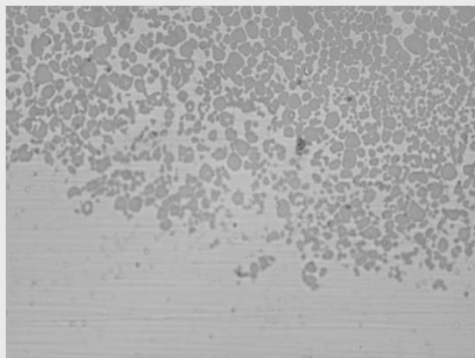


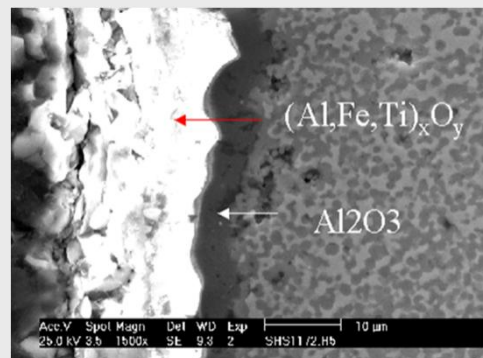
Case novel hard metals for extreme aggressive environments

Development of high temperature erosion and corrosion resistant material

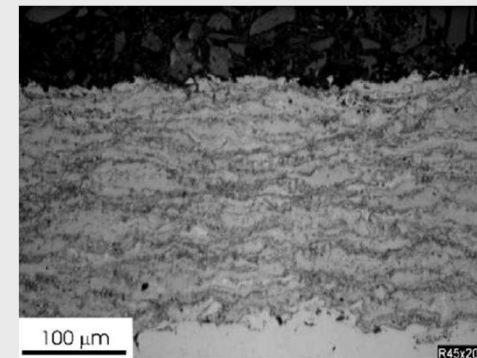
- Titanium carbide with superalloy-type metallic matrix.
 - Bulk components or coatings
- The hardness values of the materials can be varied between 1000-1800 HV1
- Due to metallic matrix, toughness is significantly better compared to ceramic materials.
- Applications for example hot-corrosion resistant components, components for power plants like nozzles or combustion chamber components.
- Patented: US6818315 (B2) WO02053316 (A1) JP2004517213 (A) EP1343601 (A1) EP1343601 (B1) EP1343601 (B8) DE60111565 (T2) AT297826 (T)



Boundary between laser coating and base material



Erosion and oxidation resistance up to 1300°C



Microstructure of HVOF-sprayed coating