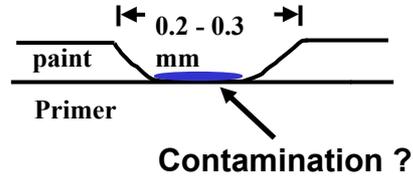
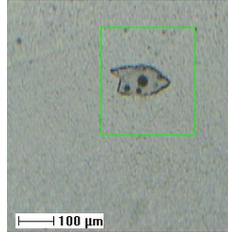


Application note n° 1

Paint adhesion failure characterisation

Subject: Crater formation on a paint due to a wettability defect of the paint on a primer

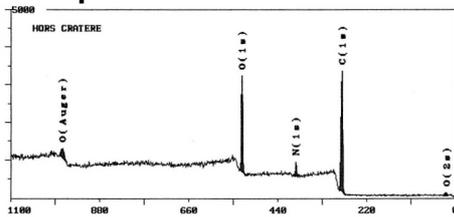


Techniques: XPS + ToF-SIMS

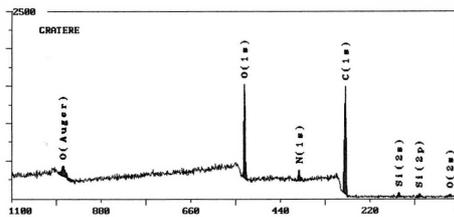
- ✓ XPS : localised analysis (crater size < 500 μm) and elemental/chemical identification of contaminant
- ✓ ToF-SIMS : molecular analysis

Results:

XPS spectrum outside the crater



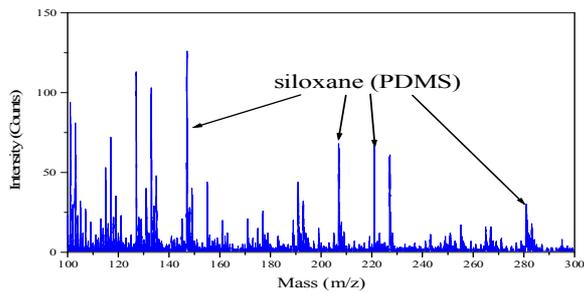
XPS spectrum in the crater



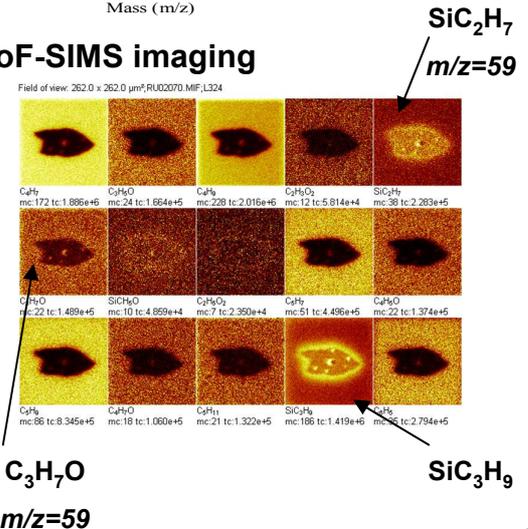
XPS quantitative analysis

at. %	C	O	N	Si
crater	73	22	3	2
outside crater	74	23	3	-

ToF-SIMS spectrum inside crater



ToF-SIMS imaging



Conclusion:

By XPS : adhesion failure due to surface contamination by a siloxane compound
 By ToF-SIMS : PolyDiMethylSiloxane (PDMS) contaminant