

ET High Risk List

1. Process control of suppliers.
 - Limited insight into vendor changes and their process control implementation.
 - Unknown vendor and supplier process changes, including sub-vendors/suppliers.
 - Flame retardant in SS-1171. Unknown vendor/suppliers' failure to follow requirements.
 - BSTRA heat treat issue (sub-tier vendor).
 - Use of wrong weld rod by vendor (Arrowhead).
2. Not following requirements and specifications in testing, manufacturing and material selection.
 - Things overlooked in the manufacturing process, such as planishing the wrong weld, leaving one in an unplanished condition.
3. Loss of corporate knowledge.
 - Loss of experienced personnel from the program, both contractor and government.
 - Loss of corporate knowledge at MAF and NASA with lots of "old timers" retiring or taking buyout
4. Wide panel "philosophy" used for flight clearance
5. TPS supportability:
 - Lack of understanding of sensitivity of foam performance to changes in foam processing, material component changes and environments
 - Limited insight into vendor changes
6. TPS debond caused by:
 - Material deficiency
 - Improper application
 - Degradation of the TPS during transport, propellant loading, or ascent
 - Heater malfunction which exceeds TPS bondline capability
 - Purge malfunction (over-temperature)
 - LO2/LH2 Tank Buckling
 - Propellant leaks
 - Overheated pressurization gas
7. Vendor hardware which is installed on the ET and which Lockheed Martin is not responsible for "touching."
8. EPA regulations on ET materials
9. Lack of communication
10. Complex repairs (R10 or more) of AL2195 resulting in cryogenic inversion (reduced weld strength at cryo)