

N&R Engineering – A SDB 8(a) Company

N&R Engineering develops and applies advanced analytical methodologies to complex engineering problems. The mainstream pursuits are:

- Accelerate the acceptance of probabilistic analyses
- Provide designers and decision-makers with software tools that capture the impact of critical uncertainties

Contact: Dr. Vinod Nagpal, President & CEO

Address: 6656 Pearl Road, Parma Heights, Ohio 44030

Telephone: 440-845-7020

Website: www.nrengineering.com

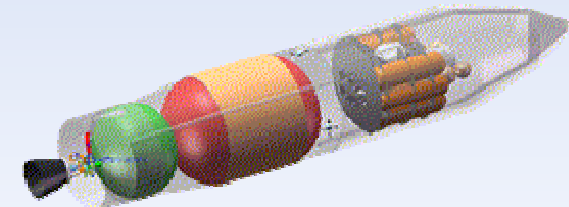
Recent N&R Engineering Accomplishments

- Performed probabilistic structural analysis of Ares I-X Upper Stage Simulator (USS) weld joints that substantially increased reliability confidence.
- Provided quality assurance of Ares I-X USS



“Critical weld crack size” is greater than detection resolution

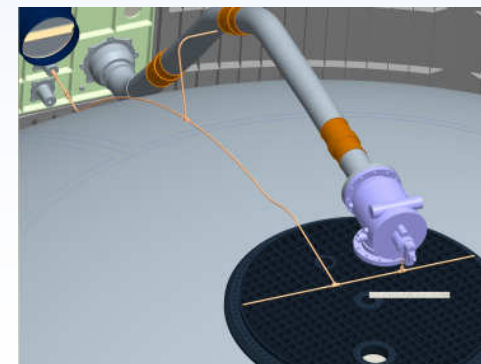
- Performed reliability analyses that guided conceptual design of the Earth Departure Stage.



E.g. - Loss of mission probability = 210

- Performed Failure Modes and Effects Analyses (FMEA) of Ares launch vehicles and test facilities to identify critical failure modes.

E.g. - Purge and hazardous gas detection systems



Recent N&R Engineering Accomplishment

- Developed *PRODAF* software tool that accelerates the process of system-level reliability-based design/analysis of complex systems involving physics-based component-level modeling.

