

METHODOLOGIES



Proven repeatable analysis methodologies provide consistency and reduce the risk of miscommunication. Recognized analysis and methodologies are easily understood and accepted across industries and regulatory agencies.

Mission critical analysis and decisions are a balanced combination of experience and the right analysis methodology. Here at AESC, our staff's practical knowledge combined with our knowledge of proven methodologies bring you the most comprehensive solutions.

*Proven analysis to meet
Industry regulations*

FAULT TREE ANALYSIS

Fault tree modeling is a structured technique that breaks down a complex problem into its simpler elements. An undesired system failure such as a safety system failure is selected for the top event. The top event is related to more basic failure events by logic gates and or more basic events. The process is continued, until the events can no longer be expanded.

EVENT TREE ANALYSIS

To understand and mitigate risks due to accident progression, AESC's staff takes advantage of event tree modeling technique as a systematic approach to accident progression studies, and prevention. Event tree models are constructed to investigate physical processes for accident sequence groups, before and after an incident, and to map out all possible progression paths.

ROOT CAUSE / FEMA / FMECA ANALYSIS

AESC offers a leading edge probabilistic base root cause analysis methodology that has proven successful in identifying root causes for safety risk as well as accidents. Classify interactions into four broad but simple categories, of "why" causes of failures, "how" behavioral aspects, "when" time frame of the failure, and "where" places where the failures occur.

Failure Mode and Effects Analysis (FMEA), and Failure Mode and Effects Criticality Analysis (FMECA), are processes by which potential weaknesses in design or a process is identified.

RELIABILITY, MAINTAINABILITY, AVAILABILITY ANALYSIS (RMA)

AESC brings years of experience and expert staff specializing in multitude of RMA analysis techniques and methodologies. AESC has utilized its expertise during design, prior to and after commercial distribution, to assess reliability, maintainability, availability of products and systems. Our belief is that high reliability and availability systems inherently increase safety.