



INDUSTRY

POWER PLANTS

RAM analysis empowers the analyst to evaluate the criticality of systems and to understand how many outages one should expect of the power supply system

Power interruptions such as small shortages or complete power failures have an impact on society; and on industry. The consequences of these interruptions for industry are lower productivity, inability to deliver their service, higher maintenance costs and unsafe operating conditions for equipment.

Understanding the importance of power supply

Power supply plays a decisive role in ensuring economic output. Ensuring continuous power generation depends on a number of parameters but mainly on high availability of systems.

This high availability can be influenced by three factors:

- Reliability - equipment failures
- Maintainability - repairing an equipment before or after its failure
- Operability - operational constraints such as the incapacity of fully compressing gas when losing a redundant compressor

High availability of power supply can be supported by a well-established methodology known as RAM analysis. RAM analysis takes into account Reliability, Availability and Maintainability factors to predict system performance based on a combination of simulation techniques with the Monte Carlo method.

RAM analysis also empowers the analyst to evaluate the criticality of systems and to understand how many outages one should expect of the power supply system. By taking into account equipment failure, maintenance strategies and operational constraints, RAM analysis helps to optimize productivity and return on investment.



How do you benefit from Maros advanced RAM analysis?

The ability to forecast system performance has proven to be of significant benefit in a range of industries. Capturing the interdependency of the different systems in the power plant also plays an important role to achieve a precise predicted performance figure.

RAM studies will support decision-making that will optimize production at facilities in a safe and responsible way.

Some of the questions Maros can help you answer:

- What is the production efficiency for the base case design?
- How does production efficiency vary for the alternate designs?
- What is the optimum redundancy for critical systems?
- What is the impact of maintenance issues?
- What is the impact of operational flexibility?
- What is the incremental NPV for the alternate scenarios against the base case?

Combining your experience about the operation of the asset to a powerful RAM software tool enables you to:

- Evaluate the achieved production efficiency and production losses
- Rank of critical systems, equipment and modes of failure
- Thoroughly investigate maintenance strategies and its needed resources
- Assess operational costs, revenue losses and through-life NPV reduction because of subsea failures/activities