



Human error factors in
gas turbine operation & maintenance

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Heavily increased focus on cost reduction

The heavily increased focus on cost reduction in gas turbine operation & maintenance over the past years has resulted in less specialized gas turbine plant managers, operators & maintenance engineers on-site and in often unnoticed negligence of routine daily maintenance.

This situation has increased the risk of human error in gas turbine operation & maintenance.





Most common causes of human error

- Limited reliable information for decision making
- Limited education & training
- Limited professional experience
- Limited on-the-job guidance & support
- HMI not understandable for operators
- Procedures not up-to-date
- Manuals & drawings not up-to-date
- Lack of time for systematic analysis & reflection





Most common solutions to reduce human error in gas turbine O&M

- Education & training
- Professional & personal competence development
- External technical expertise
- Remote monitoring & diagnostic systems
- Decision support solutions
- Extensive long-term service agreements with OEM
- Outsourcing with strict service level agreements





Human error reduction on site

Reducing human error on site:

- execute a competence & capability assessment and
- execute the recommended training, personal & professional development and remote decision support program for the operation & maintenance staff

