



Condition Monitoring (Vibration) - Oil and Gas



Situation

The vibration-monitoring project was instigated to extend gas turbine life and in particular the time between major overhauls; reduce cost and reduce the risk of catastrophic failure. The company operates 24 turbines of varying types and fulfilling various functions. The operation was located in the Far East with its inherent logistical problems.

Tasks

The project was divided into two phases; the initial phase included an on-site assessment to establish the current situation together with the production of a project cost analysis and risk assessment. The second phase involved the implementation of the program.

Activities

A detailed examination of the equipment at the sites was conducted, taking into account the operating context. An initial base line condition was established for all of the key items. The overall cost savings on a year on year basis were calculated and a detailed implementation plan was presented to the Head Office management.

Result

After the initial assessment and presentation, the full project was approved and all of the recommendations implemented.

Over time it was possible to establish the correct data collection frequencies, types of analysis that were required, base line conditions, trends etc.

The collection of the vibration data, trend analysis and an ongoing review enabled the move from a calendar based maintenance regime to one using condition based and predictive maintenance.

This resulted in significant cost savings and also provided greater flexibility when scheduling shutdowns.