Chapter 1
Condition Monitoring in Non-stationary Operations

Condition monitoring in non-stationary operations is the main subject of the conference. The subject comes directly from industry needs and observations of real objects. Most monitored machines used in industry work in non-stationary operations condition. The non-stationary operations are due to the fulfillment of machinery tasks, for which they are designed for. All machinery used in different kind mines, transport systems, the private or public vehicles like: cars, buses, helicopters, ships and battleships and so on work in non-stationary operations. The papers presented in this chapter try to generalize the solution and to give individual response for individual applications of monitoring and diagnosing when the machine works in stationary operations.