The alarm handling system on a process plant is the first line of defence. It is vital for ensuring that the product remains within specification and for reducing demands on the trip system. Yet many control systems have not been designed with this simple objective in mind. The result is that operators are frequently subjected to more alarms that they can safely handle. The alarm system ceases to be a decision support tool and becomes a noisy distraction that is ignored or not taken seriously.

Without effective alarm management as an integral part of safety planning it is not possible to be certain that operators will respond correctly when there is a plant upset. The HSE has also made it clear that doing nothing is no longer a valid option:

“Better alarm handling should be seen in an overall context of encouraging companies to seek the best opportunities for improvement rather than just to prospect for problems alone. Alarm management has to be part of a continuous process of improvement, just as it is with most other business areas such as quality. Why manage safety any differently?”

Source: Paper entitled “Better Alarm Handling - a practical application of human factors” by John Wilkinson and Dr Debbie Lucas of the HSE.
What we offer

The benchmark represents a phase of a total alarm management initiative, although it is also effective as a stand-alone exercise or as part of a larger rationalisation initiative.

Based on the guidelines in EEMUA 191, it will quickly establish compliance with recognised good practice and provides an input for early action planning.

Each benchmark consists of:

- Structured interviews with key personnel such as operators, supervisors, engineers and production management staff
- Observation of the control room environment covering human factors such as layout, use of sound, HMI’s (Human - machine interfaces), operator custom and practice
- Analysis of alarm statistics against the metrics recommended by EEMUA 191
- Review of documented procedures covering management and design of the alarm system, change management and training

The study consists of a few days preparation followed by no more than three days on site.

The deliverable is a feedback presentation at the end of the visit summarising both the areas of good practice and the areas for improvement and covers:

- Maturity of alarm handling practice, procedure and culture
- Benchmark assessment against the recommendations in EEMUA 191 and IEC 62682
- Suitability of existing management procedures
- Plan of action including suggested phasing and likely costs, if possible. Priorities for action and ‘quick wins’ are also identified

Optionally, the feedback presentation can be delivered as a more detailed, formal written report.

ABB provides a range of alarm rationalisation and management services based on a full lifecycle approach, rather than based on a particular product or technology. The service is equally applicable to both existing control systems and applications, and to the design of new systems. There are four distinct phases in the life cycle: Benchmarking, planning, implementation and review activities. Continuous improvement occurs when the review phase is used to drive subsequent planning, and this is where most benefit can be derived from the process.

The alarm management benchmark is part of the total alarm package from ABB. The benchmark is a quick and cost effective way to establish the effectiveness of existing alarm handling systems. This may be driven by a wish to benchmark against recognised good practice or when there is regulatory pressure to demonstrate a plan of alarm management improvement.

Benefits

- Improvement in health, safety and environmental performance
- Fewer trips and instances of equipment damage
- Increased productivity
- Tangible bottom line benefits - improvement projects have saved customers over £100,00 per annum in increased production
- Product quality

Why ABB?

ABB has unrivalled experience gained over 30 years with one of the World-class manufacturing organizations of our time. This includes delivering focused alarm improvement programs for manufacturing clients on both batch and continuous processes.

We also have access to the wealth of experience available in ABB worldwide, meaning we are capable of delivering a complete service, leaving you free for other priorities.