

Hard-won experience of alarm management

It was honestly out of real concern that I installed a flammable gas alarm in my wife's kitchen at home, after the smell of gas from the new hob had shown that the control knobs could be left cracked open slightly, after cleaning up. The alarm worked fine on test, in the summer. Come the winter, with a tendency to use more red wine in the cooking, and even for occasional pans of hot mulled wine, the alcohol fumes caused increasing numbers of false flammable gas alarm events which led to forcible suggestions that the whole safety system should be ejected out of the window. To solve the problem, a new alarm management procedure was introduced, using a hob light switch: when the light is on, during active cooking, the power to the alarm is off, and a full-scale production operations staff walk-out is avoided.

Management of alarm systems

This alarm management problem leads on to a look at the practical and pragmatic approach adopted in the second edition of "The Alarm Management Handbook," by Bill Hollifield, Principal Alarm Management Consultant for PAS, and Eddie Habibi, founder and ceo of PAS: incidentally Hollifield is also co-author of "The High Performance HMI Handbook." Habibi explains the background to the book and the second edition: "Poorly performing alarm systems hinder an operator's ability to mitigate abnormal situations that can lead to consequences ranging from minor process upsets to catastrophic accidents. With the release of the new ANSI/ISA-18.2-2009 'Management of Alarm Systems for the Process Industries,' PAS wanted to update the book, first published in 2006, to incorporate these guidelines."

Practical examples

Plus the new edition includes much additional practical information on solving nuisance alarm problems, implementing advanced alarm handling techniques and improving the human factors associated with alarm systems. In his foreword, Jim Pinto commends the 2nd edition to "managers, process engineers and operators; an essential textbook to keep around and refer to regularly. I particularly enjoy the practical quotations and real-world examples."



Eddie Habibi - "Poorly performing alarm systems hinder an operator's ability."

He suggests that future control systems must become self optimizing, reducing the need for operator intervention and that the systems should be trained "to incorporate the knowledge of the operator" – or at least maybe to trigger access to this knowledge.

From their review of the history of the alarm management problem (Chapter 2) the authors highlight the topics of acceptable alarm rates for operators, the lack of attention paid to alarm set point adjustment by even rigorous Management of Change policies, and finally the legal requirement put onto industry that legacy/installed alarm systems shall be reviewed and meet the latest ANSI/ISA standards (or the equivalent standards in Europe and elsewhere). All plants need an alarm management review/policy/activity, in place now, before the inspectors arrive to investigate an incident.

Clear guidance

As Arthur Colwell, svp at BASF commented about the book: "Effective alarm management is an obligation not only to the employees operating our plants, but also to the communities granting us our license to operate. Here is clear guidance for the technical expert who must implement an effective alarm management system, and excellent in sights for the manager who must justify the necessary investments."

A good place for you, and then maybe your control system customers, to start, is by reading The Alarm Management Handbook, and having your colleagues read it too. Habibi sent two copies of the second edition to the INSIDER for review, so following his suggestion, one of these will be offered in a free draw, using those reader's names who apply by email by end January to alarms@iainsider.co.uk with the subject line of 'Alarm Management.'