

Case Study: Implementation and Integration of a Safety Management System within an ISO9000/14000 Certified Facility

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Key Words: safety, management, system, ISO 14000, ISO 9000, ISO Certification, Rockwell Automation

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Abstract:

Rockwell Automation, a leader in Complete Industrial Automation Solutions, has well-established quality and environmental management systems that have been certified to the ISO 9001 and ISO 14001 standards respectively. Management has embraced the system philosophy and so a logical extension was to extend management systems to the safety arena. Within the past year, a concerted effort has been made by the Rockwell Automation Headquarters Quality, Environmental and Safety to design, develop and implement a safety management system that could be certified to the BSI 18000 standard and would meet the requirements of the draft ISO 18000 standard.

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Abstract:

Several Rockwell Automation facilities are currently implementing a safety management system with plans to be certified to the BSI 18000 standard by the end of this calendar year. Leveraging existing management systems (ISO 9000 and ISO 14000) at the facilities is key to minimize the resource and financial impact and is the reason that Rockwell Automation has been able to transparently integrate a safety management system.

Like many companies, safety coordinators at Rockwell Automation facilities often have too many problems to solve with too little resources. The question then becomes, "What should I do first?"

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Abstract:

Prioritizing safety resources based on risk within a management system is a different approach for many businesses. Typically, businesses have focused on safety issues with the primary objective of meeting a compliance standard. The Rockwell Automation Safety Management System addresses standards compliance but also assigns priorities based on significant risk to the facility. These significant risks then become the objectives and targets for the upcoming year.

Abstract:

For Rockwell Automation, implementing a safety management system is an easier process this time because this is the third management system to be installed and management has already seen the benefits of management systems.


Key elements of a continual improvement management system including policy, planning, implementation, corrective action and management review are included in the safety management system using many of the existing ISO 9000 and ISO 14000 elements already in place at the facilities.

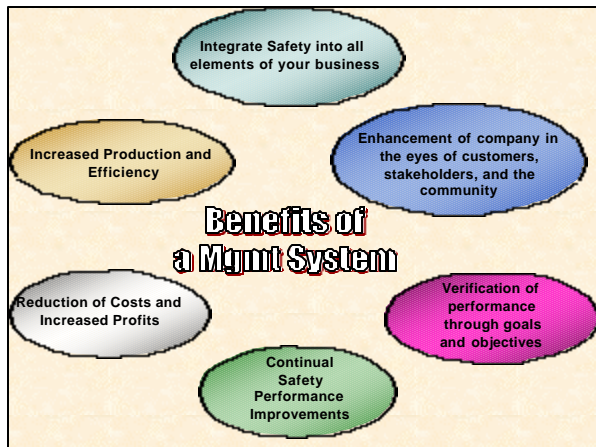
Abstract:

Although it is too early to measure the results of the implementation of the safety management system, data on key safety parameters such as lost workday rates and workman compensation costs are being tracked to measure quantitatively the success of the implementation of the system.

EHS Management Systems


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Program vs. System Approach Rockwell Automation's Move to a Safety Management System

TRADITIONAL PROGRAM	➔	SAFETY MANAGEMENT SYSTEM
Reactive	➔	Proactive
Random	➔	Systematic
Focus on Compliance	➔	Focus on Significant Risk
Relies on 100% Compliance	➔	Relies on Conformance to Company Policy
Program of the Month	➔	Sustaining Process
Minimum Performance Level	➔	Incorporates Best Management Practices
Task Completion Oriented	➔	Continuous Process Improvement
Safety Director Dependent	➔	System Reliant
Bill Paying Service	➔	Cost Avoidance Approach
One Time Tied to Incentives	➔	Repeatable and Measurable
Continually Reinventing	➔	Knowledge Capture & Reuse



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OHSAS 18001 Specification

- No ISO standard for safety exists to date
- OHSAS 18001 established as specification by interested parties
- BSI 8800 is a certifiable standard essentially the same as OHSAS 18001 and draft ISO 18000

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SMS Requirements

- 4.1 General Requirements
- 4.2 Occupational Health and Safety (OH&S) Policy
- 4.3 Planning
- 4.4 Implementation and Operation
- 4.5 Checking and Corrective Action
- 4.6 Management Review

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Rockwell Automation Approach

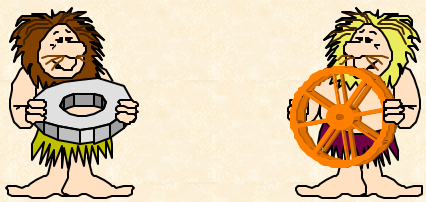
- Common Safety Management Procedures
- Adapted to, then owned by individual facilities
- Leverage existing Quality Management and Environmental Management Systems
- Certify on facility level only
- Use same registrar

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DON'T RE-INVENT



USE EXISTING PROGRAMS & SYSTEMS

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Transition Team – Who is Needed and Why?

- Core Team? Support Resources?
- Safety Coordinator
- Quality, ISO 9000 Coordinator
- Internal Auditors
- Environmental Coordinator
- ISO 14000 Coordinator
- Management
- Finance
- Production
- Human Resources
- Development



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Comparison between 14000 and 18000

OSHAS 18001	ISO14001
4.2 OH & S Policy	Environmental Policy
4.3 Principles & Planning including Risk Assessments	Principles & Planning Including Aspects & Impacts
4.4 Implementation and operation including operational control and safety training	Implementation and operation including operational control and training
4.5 Checking and Corrective Action including Records	Checking and Corrective Action including Records
4.6 Management Review	Management Review

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Elements of OHSAS 18001 Safety Management System

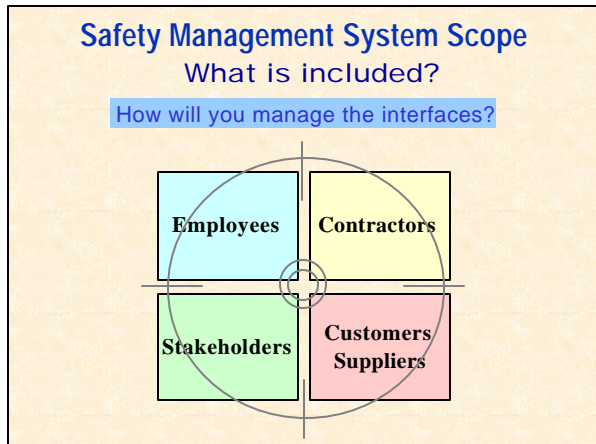
OHSAS	ROCKWELL
<input checked="" type="checkbox"/> 4.2 OH&S Policy	900-40-01
4.3 Safety Management System Principles Safety Planning Program Legal Requirements	900-40-20 900-40-21 & 22
4.4 Program Implementation and Operation Safety Training	900-40-20 900-31-10
4.5 Internal Audits and Corrective Action	900-40-23
4.6 Management Review	900-40-24

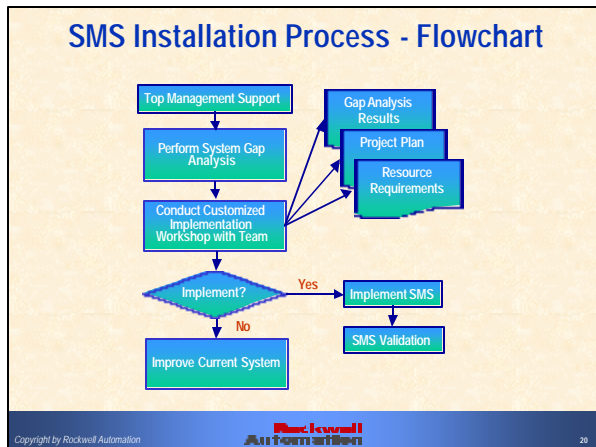
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4.2 Safety Policy

Policy Statement:	Policy Guidelines:
<ul style="list-style-type: none"> ■ Authorized by top management ■ Objectives ■ Committed to improve performance 	<ul style="list-style-type: none"> ■ Appropriate to nature and scale of Safety and Health risks ■ Commitment to continual improvement ■ Commitment to compliance ■ Documented, implemented and maintained ■ Communicate importance of employees safety obligations ■ Available to interested parties ■ Reviewed periodically

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Elements of OHSAS 18001 Safety Management System

OHSAS	ROCKWELL
4.2 Safety Policy	900-40-01
4.3 Safety Management System Principles	900-40-20
Safety Planning Program	900-40-21 & 22
Legal Requirements	
4.4 Program Implementation and Operation	900-40-20
Safety Training	900-31-10
4.5 Internal Audits and Corrective Action	900-40-23
4.6 Management Review	900-40-24

Significant Risk Assessments

- Identify Hazards - what about working in the process could potentially injure or cause a person to be ill.
- Controls - actions deployed to reduce the potential risk of injury. (These have been categorized as engineering controls, work practice controls, training and PPE)
- Risk – combination of the likelihood and consequences of a person being injured.

We control hazards to reduce the risk of injury or illness.

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4.3.1 Planning: Hazard Identification, Risk Assessment and Risk Control

- Significant Risk Assessment Process
 - ◆ Ongoing identification of potential hazards to employees
 - ◆ Assessment of the risks of those hazards identified
 - ◆ Implementation of appropriate control measures
- Use this process to help establish targets and objectives

NOTE: Activities considered

- Routine and non-routine
- Contractors, subcontractors, visitors, and other personnel with facility access
- Workplace facilities

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Methodology for Hazard Identification, Risk Assessment and Risk Control

- ◆ Reduce the risks before an incident can occur
- ◆ Apply controls methods based on your operating experience and capabilities risk control measures
- ◆ Include input from others for facility requirements, training needs and development of operational controls
- ◆ Monitor initiatives to ensure proper implementation
- ◆ Perform a Significant Risk Assessment after controls have been fully implemented to re-assess the risks

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4.3.3 Planning: Objectives

- Consistent with the Safety Policy
- Includes legal and other requirements (process in place)
- Significant risk assessment process
- Technological options
- Business requirements
- Interested stakeholders involved
- Documented, measurable and for each function in the organization.

4.3.4 Management Program

Project plans for Safety Initiatives


- Written objectives
- Designated responsibilities
- Steps defined
- Schedule tracked
- Projects reviewed at planned intervals

Objectives and Targets - Example

Significant Risks	Activity, Product, Service	Objective	Target	Responsibility	Milestone/ Plan	Review Frequency	Accomplishment Status


Elements of OHSAS 18001 Safety Management System

<u>OHSAS</u>	<u>ROCKWELL</u>
✓ 4.2 Safety Policy	900-40-01
✓ 4.3 Safety Management System Principles	900-40-20
✓ Safety Planning Program	900-40-21 & 22
✓ Legal Requirements	
4.4 Program Implementation and Operation	900-40-20
Safety Training	900-31-10
4.5 Internal Audits and Corrective Action	900-40-23
4.6 Management Review	900-40-24

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4.3.2 Legal and Other Requirements

- Identify Federal, State, Local requirements in a matrix
- Explain your process to keep current
- Communicate relevant information to employees or other relevant parties

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Elements of OHSAS 18001 Safety Management System

<u>OHSAS</u>	<u>ROCKWELL</u>
✓ 4.2 Safety Policy	900-40-01
✓ 4.3	Safety Management
✓ System Principles	900-40-20
✓ Safety Planning Program	900-40-21 & 22
✓ Legal Requirements	
4.4 Program Implementation and Operation	900-40-20
Safety Training	900-31-10
4.5 Internal Audits and Corrective Action	900-40-23
4.6 Management Review	900-40-24

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4.4.3 Consultation and Communication

- List the processes for communicating to and from employees and other interested parties
- Understand and explain how employees are involved
 - Committees
 - Assessment discussions
 - Training questions
 - Incident investigation interviews
 - Suggestion systems
 - Etc.



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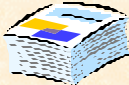
4.4.4 SMS Documentation

- Describes the core elements of management system

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4.4.5 Document Control

- Leverage or parallel quality procedures
- Control documentation
 - Author/Approval
 - Maintenance
 - Revision control with dates
 - Communicate changes
 - Obsolete documents



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4.4.6 Operational Control

- Cover activities with significant risks where deviations could increase the risks to Safety
- Have written safety rules or guidelines
- Processes for assessing risks of goods, equipment and services purchased and used by the organization
- Relevant safety concerns communicated to suppliers and contractors

4.4.7 Emergency Response and Preparedness

- Reference existing Emergency Response Plan



Elements of OHSAS 18001 Safety Management System

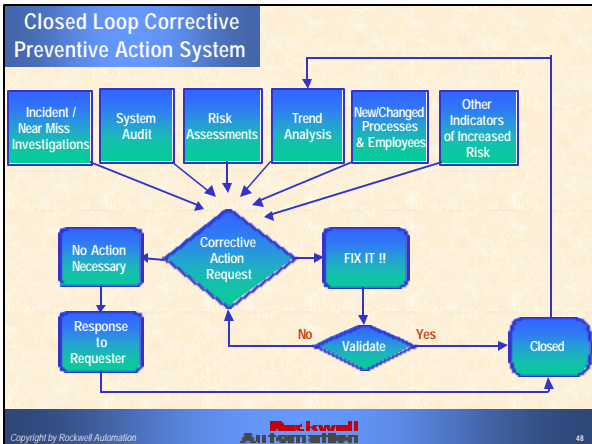
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4.5.1 Performance Measurement and Monitoring

- Processes exist to monitor and measure performance
 - Meeting OH&S objectives
 - Calibration, controls, sampling, monitoring in support of objectives and targets
 - Reactive measures of performance to monitor incidents, and near misses
 - Compliance audits exist
 - Using measures to facilitate subsequent corrective and preventive action analysis

4.5.2 Accidents, Incidents, Non-conformance and Corrective and Preventive Action

- Leverage Quality System for closed loop investigations Corrective and Preventive action
- Modify to define responsibility for Safety program
- Corrective action to include accidents, incidents and non-conformance
- Evaluate all applicable changes (including improvements) using risk assessment process



4.5.3 Records and Records Management

- Maintain Safety records
 - ◆ audits,
 - ◆ training,
 - ◆ management reviews
 - ◆ etc.

4.5.4 SMS Audit

- Audit Schedule: "based on the Safety importance of the activity concerned and the results of previous audits." (at least each element/year)
- Leverage Quality / Train internal auditors
- Based on checklist provided and site SMS processes

Elements of OHSAS 18001 Safety Management System

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<input checked="" type="checkbox"/> 4.6 Management Review	900-40-24

4.6 Management Review - Std

- Designed to be a decision making meeting
- Review Significant Risks including a recent Significant Risk Assessment
- Objectives and targets (review previous year and approve next year)
- System audits and compliance audits
- Corrective and Preventive action plans
- Changing circumstances
- Show continual improvement

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Management Review - RA

- Demonstrate the continuing suitability, adequacy and effectiveness in support of the Safety policy
- Conduct at least annually with top site management
- Signed attendance
- Submit copy to HQ Safety annually
Fiscal Year - By October 15th every year

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