

# Basic Guidelines of Safe Maintenance for SMEs

*Maintenance activities can put workers at risk, but not carrying out maintenance may put much more workers at risk. We all in maintenance should remember that when we are performing maintenance, our personal health and safety and the health and safety of our colleagues depend on the quality of our work.*

**KENNETH O'REILLY**  
Maintenance Technology  
Consultant  
MEETA, the Irish Maintenance  
and Asset Management  
Society  
kennethoreilly3@eircom.net



The Irish Maintenance and Asset Management Society, MEETA, promotes a structured approach to safe maintenance with basic guidelines that workplaces in all industry sectors can follow. These guidelines are particularly directed to the needs of companies where resources or expertise in the field of safe maintenance assessment and management might be limited. Basic guidelines of safe maintenance are divided into six separate areas of interest. This article will discuss these six topics.

## Planning

The employer must conduct a risk assessment for the activity, and involve workers in this process. The following points have to be considered:

- The scope of the task: what needs to be done, how much time is needed for the task, how other workers and activities will be affected at the workplace
- The identification of the hazards: for example electricity, exposure to dangerous substances, presence of dust/asbestos in the air, confined space, moving parts of machinery, falling from or through something, heavy

objects to be moved, parts difficult to reach or to access

- What is needed for the activity: skills and number of workers doing the job, who will be involved, what the roles of individual persons are (responsibilities for contacts with the workers of the contractor or host employer, managing the tasks, who to report possible problems to), tools that have to be used, personal protective equipment (PPE) and other measures to protect workers (e.g. scaffolding, monitoring equipment)

that may be needed

- Safe access to the work zone, and means of (quick) escape
- The training/information that has to be provided for workers involved in the task, as well as those working around them, about the task (to ensure competence of workers and their safety), the 'chain of command' and any procedures that will be used during the activity, including the reporting of problems. This is especially important if the maintenance is carried out by subcontractors.



PHOTO: EMERSON PROCESS MANAGEMENT

**TABLE 1. How to identify potential hazards?**

Walk around the workplace and look at what could cause harm
Consult workers and/or their representatives about problems they have encountered
Consider long-term hazards to health, such as high levels of noise or exposure to harmful substances, as well as more complex or less obvious risks such as psychosocial or work organisational risk factors
Look at company accident and ill-health records
Seek information from other sources such as <ul style="list-style-type: none"><li>• Manufacturers' and suppliers' instruction manuals or data sheets</li><li>• Occupational safety and health websites</li><li>• National bodies, trade associations or trade unions</li><li>• Legal regulations and technical standards.</li></ul>

### Identify Hazards and those at Risk

We must all remember that a hazard can be anything — whether work materials, equipment, work methods or practices — that have the potential to cause harm. In **TABLE 1** there are some tips to help identify the hazards that matter.

For each hazard it is important to be clear about who could be harmed; it will help in identifying the best way of managing the risk. This doesn't mean listing everyone by name, but identifying groups of people such as 'people working in the storeroom' or 'passers-by'. Cleaners, contractors and members of the public may also be at risk.

### Working in a Safe Environment

The procedures developed at the planning stage in risk assessment have to be put into action. For example, the power supply to the equipment worked on should be switched off and the agreed lock-off system used. The warning card — with the date and time of lock-off as well as the name of the person authorised to remove the lock — should be attached. This way, the safety of the worker performing maintenance on the machine will not be jeopardised by anyone inadvertently starting up the machine, who could also be affected, if, for instance, the machine is not in safe operating condition (e.g. if the safeguards have been removed). Workers should

check that there is a safe way to enter and leave the work zone, in accordance with the work plan.

### Use the Appropriate Equipment

Workers performing maintenance tasks should have the appropriate tools and equipment, which may be different from those normally used. They may be working in areas that are not normal workstations and be exposed to many hazards. Therefore, they must also have appropriate PPE (Personal Protective Equipment). For example, workers cleaning or replacing filters on extraction ventilation may be exposed to concentrations of dust much higher than normal for that workplace. Access to these filters, frequently located in the roof area, has to be made safe as well. The tools needed for the job and PPE identified in the planning and in risk assessment have to be available (together with instructions on how to use them, if required) and used.

### Safe Work Practices Developed in the Planning Stage Have to Be Followed

The work plan should be followed even when there is time pressure: shortcuts could be very costly and may lead to accidents, injuries, or damage to property. It may be necessary to notify supervisors and/or consult

with other specialists should anything unexpected happen. It is very important to remember that exceeding the scope of one's own skills and competence may result in a very serious accident.

### The Work Has to Be Checked

To ensure that the task has been completed, the item maintained is in a safe condition, and all waste material generated has been cleaned away. When all is checked and declared safe, then the task can be signed off, the locks can be removed, supervisors and other workers notified.

The final step is to complete a report for the management, describing the work done, including comments on difficulties encountered and recommendations for improvement. Ideally, this should also be discussed at a staff meeting where the workers involved in the process, as well as those working around them, can comment on the activity and come up with suitable suggestions to improve the process. ■

»**WHO** is Kenneth O'Reilly?

Kenneth O'Reilly holds Masters' degrees in mechanical and manufacturing engineering from University College Dublin and Trinity College Dublin. He is an international recognised expert in maintenance management and has worked on projects funded by the European Commission with industries throughout Europe to endorse reliability, availability, maintainability and safety systems. In 2004 he was presented with the Euraintenance Salvetti Foundation Incentive Award for his dedication and outstanding achievements in the discipline of maintenance.