No More Risky Business

A Guide to Risk Reduction in Modern Manufacturing

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Introduction

Machine safety and risk management is a major concern. According to the Australian Bureau of Statistics, the highest rates of workplace injuries are found among more manual, blue-collar occupations such as labourers (88 injuries per 1000), machinery operators and drivers (86), and technicians and trades workers (78) [1]. These groups are also identified as those most likely to suffer workplace fatalities.

SafeWork Australia estimates that work-related injuries in 2005-06 cost $57.5 billion, or 5.9% of Australia's gross domestic product [2]. To help prevent accidents and associated costs, Australia has implemented a number of measures to help ensure the safety of all Australian workers.

While the complete elimination of workplace risk is impossible, employers are obligated to minimise those risks as much as possible.

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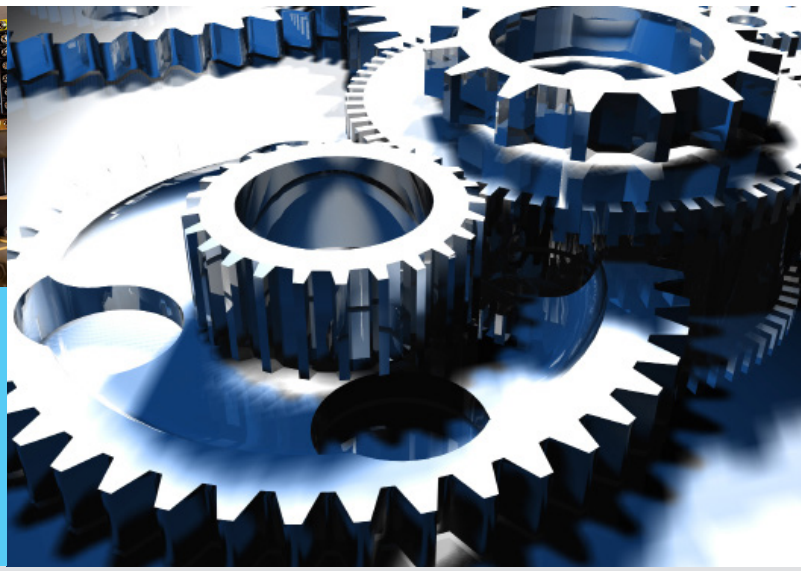


Concerns

Risk assessments estimate the level of risk posed by an identified hazard by considering the severity of outcome and the probability of occurrence [3]. To help ensure the assessment is as objective as possible, the machine operator, engineers, OH&S representatives and workplace supervisors [4] should be consulted during the assessment.

Part of the process involves determining whether the level of risk is acceptable to your business or not. If a risk is unacceptable, you must decide how to treat it. If you decide a particular risk is acceptable, you must be able to rationalise why, especially if an accident occurs [5].

There are a number of accepted methods for risk reduction, as outlined by the Workplace Health & Safety Act (1995). If a risk cannot be eliminated then the following controls must be considered, in this order [6]:

- Substitute the hazard with a hazard of lesser risk
- Isolate the hazard from anyone who may be at risk
- Minimise the risk by engineering means
- Apply administrative measures
- Use personal protective equipment

The first three points are preferred risk control methods as they don't rely on human behaviour or discipline to be effective. Where these control measures aren't possible or practical, an organisation might rely on administrative measures or personal protective equipment (PPE) to reduce risks. However these should only be adopted as a supplement to the aforementioned measures, or with the understanding that these measures are less reliable.

Administrative measures can include training and instructions or restricting access to risky areas or equipment. PPE is one of the least effective ways of controlling risks and refers to anything used or worn by a person to minimise a risk to the person's health or safety, such as goggles, ear plugs and specialty helmets [7]. By law, PPE must be supplied by the employer and it is an offence for workers to be charged a fee or levy for PPE [8].

Challenges

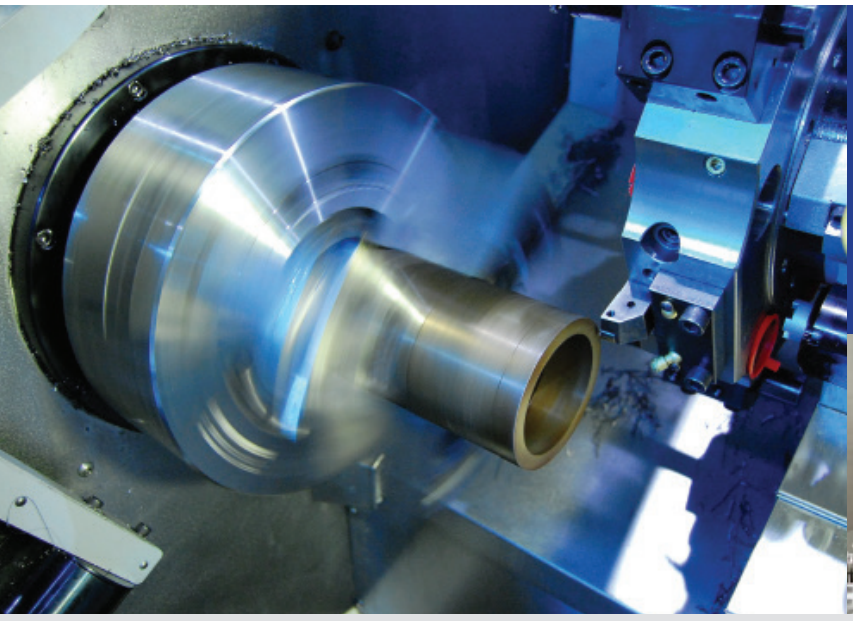
Australia's main machine safety standard, AS 4204, is currently being reviewed. AS 4024 was first published in 2006 and is a compilation of 26 ISO standards [9], the basis of which have changed since the last review six years ago. Much of this can be attributed to the rise of automation, explains Frank Schrever, chairman of Safety of Machinery Standard AS 4024 [10].

"Control systems are making more decisions, PLCs are doing all the thinking," he said. "Along with this automation comes more opportunity for things to move unexpectedly."

These changing standards have serious implications for both machinery importers and domestic manufacturers exporting to Europe as many of the machines coming into Australia are non-compliant [11].

Schrever notes that "the law [demands] that the importer and the supplier of the machinery... control the risks as far as is practicable, before selling to the client." [12]

This requirement can make international trading prohibitively expensive. To help facilitate trade, Australia is a signatory to The European Community-Australia Mutual Recognition Agreement on Conformity Assessment (EC-MRA), which allows manufacturers exporting to Europe to have certain products tested and certified by Conformity Assessment Bodies in Australia for compliance with the regulatory requirements of the importing country [13].



"Changing standards have serious implications; many of the machines coming into Australia are non-compliant."

Solution

SICK provide a range of services to help organisations navigate the complex regulatory system, ensuring your site is operating to code and with optimum safety provisions in place. Services include education & training services, plant walk through, hazard and risk assessment, verification and validation.

SICK is also well placed with a comprehensive suite of solutions for a wide range of applications related to machine safety.

With over 10,000 safety inspections conducted each year, SICK are market leaders in the area of industrial safety and expertise.

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[11] ibid.
[12] ibid.
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