Health and Safety
Executive

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HM Inspector of Health and Safety

Manufacturing Sector

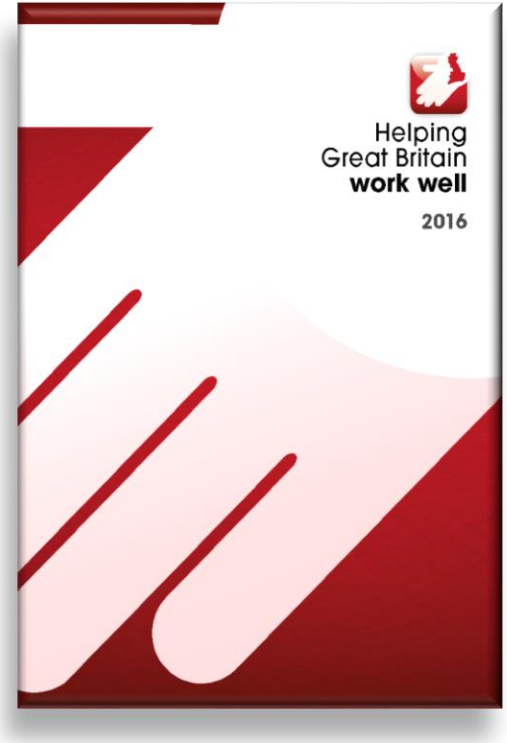
HSE ‘Helping GB Work Well’

“HSE will continue to take its responsibility as the prime mover, working with co-regulators, colleagues across government and other stakeholders to ensure our regulation stays simple and effective, and that our guidance is accessible to all. But broadening ownership of the ambition to improve health and safety is the key to our success”.

Tackling ill health

Acting together

Managing risk well



SHINE

A LIGHT ON WORK-RELATED ILLNESS

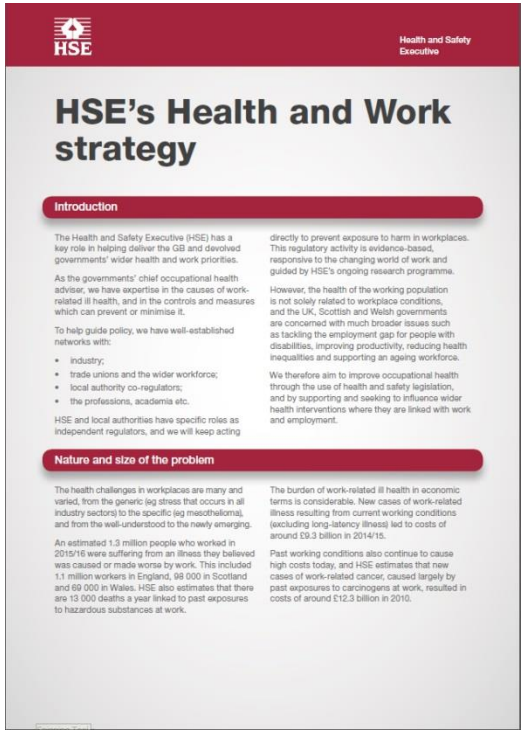
#WORKRIGHT SO YOUR WORKERS CAN GO HOME HEALTHY

HSE

Social media

Health and Work Strategy Plans and Sector Plans

- Published at the National H&S Conference on 18 September 2017.
- Three year plans, but longer term thinking



HSE

Health and Safety Executive

HSE's Health and Work strategy

Introduction

The Health and Safety Executive (HSE) has a key role in helping deliver the GB and devolved governments' wider health and work priorities.

As the governments' chief occupational health adviser, we have expertise in the causes of work-related ill health, and in the controls and measures which can prevent or minimise it.

To help guide policy, we have well-established networks with:

- industry;
- trade unions and the wider workforce;
- local authority co-regulators;
- the professions, academia etc.

HSE and local authorities have specific roles as independent regulators, and we will keep acting directly to prevent exposure to harm in workplaces. This regulatory activity is evidence-based, responsive to the changing world of work and guided by HSE's ongoing research programme.

However, the health of the working population is not solely related to workplace conditions, and the UK, Scottish and Welsh governments are concerned with much broader issues such as tackling the employment gap for people with disabilities, improving productivity, reducing health inequalities and supporting an ageing workforce.

We therefore aim to improve occupational health through the use of health and safety legislation, and by supporting and seeking to influence wider health interventions where they are linked with work and employment.

Nature and size of the problem

The health challenges in workplaces are many and varied, from the generic (eg stress that occurs in all industry sectors) to the specific (eg mesothelioma), and from the well-understood to the newly emerging.

An estimated 1.3 million people who worked in 2015/16 were suffering from an illness they believed was caused or made worse by work. This included 1.1 million workers in England, 98 000 in Scotland and 69 000 in Wales. HSE also estimates that there are 13 000 deaths a year linked to past exposures to hazardous substances at work.

The burden of work-related ill health in economic terms is considerable. New cases of work-related illness resulting from current working conditions (excluding long-latency illness) led to costs of around £9.3 billion in 2014/15.

Past working conditions also continue to cause high costs today, and HSE estimates that new cases of work-related cancer, caused largely by past exposures to carcinogens at work, resulted in costs of around £12.3 billion in 2010.

Manufacturing Sector Plan:

Priorities:

- a reduction in the cases of occupational lung disease, MSDs and work-related stress
- a reduction in the numbers of serious and fatal incidents, particularly those caused by heavy loads, maintenance activities and catastrophic events
- increased cooperation and working between all parts of the sector, and sub-sectors, to identify and solve health and safety problems

Proactive Inspection Programme - 2018/19

Key part of HSE's current work plan for 2018/19 is to target manufacturing industries and focus on causes of OLD caused by:

- Asthmagens
- Carcinogens
- Respirable Crystalline Silica (RCS)

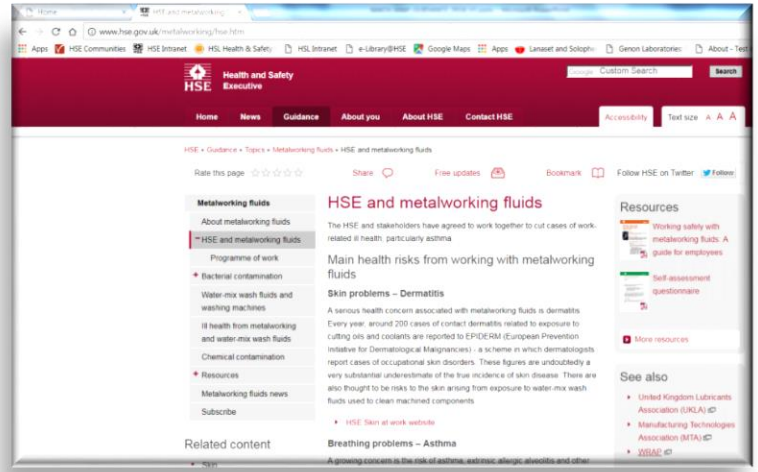
Purpose of the inspections is to ensure risks are adequately controlled/managed to reduce incidence rates of serious ill health

Welding

- Exposure to welding fume can cause OLD, including occupational asthma
- Focus on controls: LEV, RPE
- Dependant of technique (TIG, MIG, MAG), type of metal, length of exposure
- Emerging evidence: mild steel

Developing Good Practice Guide for MWFs

- HSE has worked in partnership with the United Kingdom Lubricants Association (UKLA) Metalworking Fluid Product Stewardship Group (MWFPSG) to develop guide
- Ongoing concerns about employees continuing to develop respiratory disease (e.g., occupational asthma and hypersensitivity pneumonitis) and dermatitis.
- HSE recognised the need to have consistent guidance across industry which aligns with HSE's guidance



Good Practice Guide: Technical Tips & Illustrations

2.1.2 Health surveillance for dermatitis

- Regular skin checks should be part of an overall health surveillance programme undertaken by a competent person or health service provider.
- It is important that employees are trained to recognise symptoms of dermatitis and skin irritation that may be caused by their work.
- If an employee has unexplained skin symptoms then it is essential that the occupational health provider is informed. If occupational health services are not available, employees should be encouraged to make an appointment with their general practitioner (GP) and explain that their symptoms may be work-related.

Skin checks for dermatitis

Dryness
Itching
Redness

Figure 2: **a)** Photograph of hands affected by dermatitis showing dry flaking and cracked skin, **b)** HSE poster explaining how to check for signs of dermatitis

Links to relevant HSE website advice and guidance documents

Guidance	Web link
HSE Dermatitis poster	http://www.hse.gov.uk/skin/employ/dermatitis.htm
HSE Skin checks for dermatitis	http://www.hse.gov.uk/skin/posters/skindermatitis.pdf
HSE COSHH essentials for machining with MWF	http://www.hse.gov.uk/pubns/guidance/mwf22.pdf
HSE Choosing the right gloves to protect skin	http://www.hse.gov.uk/skin/employ/gloves.htm
HSE PPE at work	www.hse.gov.uk/pubns/indg174.pdf

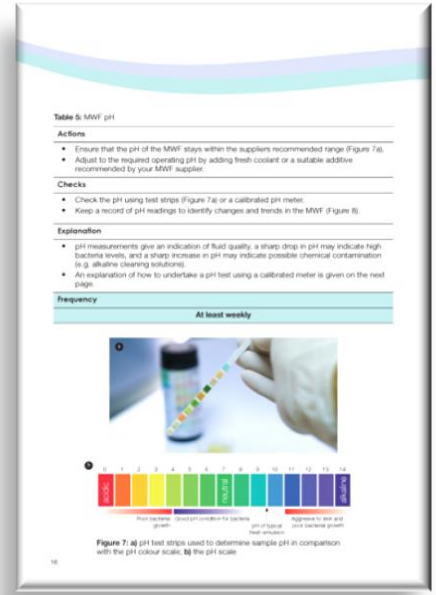


Table 5: MWF pH

Actions

- Ensure that the pH of the MWF stays within the suppliers recommended range (Figure 7a).
- Adjust to the required operating pH by adding fresh coolant or a suitable additive recommended by your MWF supplier.

Checks

- Check the pH using test strips (Figure 7a) or a calibrated pH meter.
- Keep a record of pH readings to identify changes and trends in the MWF (Figure 8).

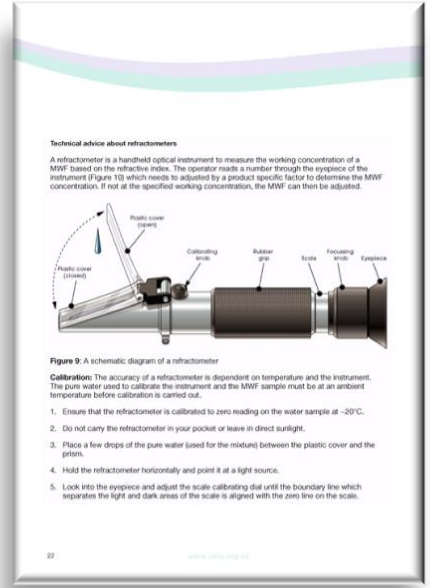
Explanation

- pH measurements give an indication of fluid quality, a sharp drop in pH may indicate high bacteria levels, and a sharp increase in pH may indicate possible chemical contamination (e.g. alkaline cleaning solutions).
- An explanation of how to undertake a pH test using a calibrated meter is given on the next page.

Frequency

At least weekly

Figure 7: **a)** pH test strips used to determine sample pH in comparison with the pH colour scale; **b)** the pH scale



Technical advice about refractometers

A refractometer is a handheld optical instrument to measure the working concentration of a MWF based on the refractive index. The operator reads a number through the eyepiece of the instrument (Figure 10) which needs to adjusted by a product specific factor to determine the MWF concentration. If not at the specified working concentration, the MWF can then be adjusted.

Figure 9: A schematic diagram of a refractometer

Calibration: The accuracy of a refractometer is dependent on temperature and the instrument. The pure water used to calibrate the instrument and the MWF sample must be at an ambient temperature before calibration is carried out.

1. Ensure that the refractometer is calibrated to zero reading on the water sample at ~20°C.
2. Do not carry the refractometer in your pocket or leave in direct sunlight.
3. Place a few drops of the pure water (used for the mixture) between the plastic cover and the prism.
4. Hold the refractometer horizontally and point it at a light source.
5. Look into the eyepiece and adjust the scale calibrating dial until the boundary line which separates the light and dark areas of the scale is aligned with the zero line on the scale.

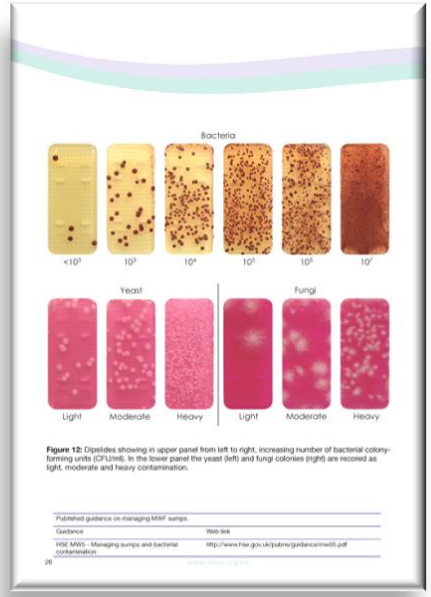


Figure 12: Dipslides showing in upper panel from left to right, increasing number of bacterial colony-forming units (CFU/ml). In the lower panel the yeast (left) and fungi colonies (right) are recored as light, moderate and heavy contamination.

Published guidance on managing MWF sumps.

Guidance	Web link
HSE MW5 - Managing sumps and bacterial contamination	http://www.hse.gov.uk/pubns/guidance/mw05.pdf

News

MAC Tool Consultation

- HSE has revised and updated MAC Tool, also developed interactive pdf. version.
- HSE would like opinion on the new versions before they are published. Please send your contact email address to MSDPP@hse.gov.uk. The consultation is due to start from end of May for 6 weeks.

News

BOHS, EEF AND EUOSHA ROADSHOWS

- A series of morning seminars that focus on the prevention of lung disease amongst welders in the manufacturing industry.
- FREE to attend, remaining events
  - 29 June Sheffield
  - 12 July Barrow-in-Furness
- To book a place go to the **Breathe Freely Website**.

Recent Prosecutions

Incident - 35-year old worker was struck and crushed by an overhead coil. The worker was delivering a steel coil site. It was lifted on to an overhead crane when the coil slipped and crushed the worker below. The employee suffered life-changing injuries to both legs which later required surgical intervention to amputate his left leg.

Findings – they failed to implement a safe system of work for unloading operations and lifting operations at its site. It was also found the company failed to manage the risks associated with lifting steel coils overhead of workers.

Fine £1 (administration) + Costs £1745.60

Recent Prosecutions

Incident - Non Fatal crush injuries - an agency worker was unchaining a vehicle ramp from a delivery lorry when the lorry moved forward with one chain still attached to the ramp, crushing the worker between the ramp and a barrier.

Findings - The company did not implement suitably robust systems of work; did not provide sufficient training to allow workers to safely unload vehicles; and did not appropriately brief visiting drivers on their role in this activity.

Fine £373,000 + Costs £8,333

Recent Prosecutions

Incident - Whilst working on the corrugated roof a worker misplaced his footing, causing him to step on a roof light falling through the roof onto a concrete floor approx 4m below. He broke several ribs and suffered spinal injuries.

Findings - the roof work was not undertaken using the correct precautions i.e. sufficient platforms, coverings, guard rails, netting or similar means of support or protection.

Fine £40,000 + Costs £495.27

Recent Prosecutions

Incident - sustained burns to face, ears and head when attempting to light a gas burner present within a powder coating oven.

Findings - the gas oven involved did not meet current health and safety standards in that it did not have a flame failure device to prevent the accumulation of unlit gas within the oven. The oven had not been adequately maintained or inspected by a person competent in gas safety. The company also failed to ensure that their employees followed a safe system of work.

Fine £20,000 + Costs £2685.45

Any Questions?

Sarah Palfreyman

HM Inspector of Health & Safety