



Priorities for health and safety in the ceramics industry

Ceramics Information Sheet No 1

Introduction

This information sheet is one of a series produced by HSE's Metals and Minerals Sector. It identifies the major causes of accidents and ill health in the ceramics industries (pottery, heavy clay and refractories) and contains information that will help you to:

- make an assessment of the risk involved in your work;
- identify priorities for action;
- compare your performance with the rest of your industry; and
- understand the action that is taking place within these industries to support the 'Revitalising Health and Safety' initiative.

This information sheet can only provide a brief outline of accident and ill health causations and remedial measures. Where necessary, more detailed guidance can be found in the publications listed in 'Further reading' or you can contact the relevant enforcing authority.

The injury rate for all injuries in each of the ceramic industries is higher than the overall rate for 'manufacturing' and higher than the combined rate for 'all industries' (manufacturing, services etc). A similar picture exists for fatal and major injuries.

'Revitalising Health and Safety' in the ceramics industry

'Revitalising Health and Safety' is the Government initiative aimed at improving the health and safety performance of industry and giving a fresh impetus 25 years after the implementation of the Health and Safety at Work Act (1974).

With support from the Health and Safety Executive, the British Ceramic Confederation and the Trade Unions have developed the 'Ceramic Industry Health and Safety Pledge'. This pledge:

- provides an opportunity for everybody in the ceramics industries to pull together and achieve genuine improvement in health and safety performance in response to the Revitalising campaign; and
- includes actions by all supporting organisations ranging from the provision of 'best practice' guidance to improved training for managers and supervisors and reinvigorated health and safety committees.

The targets set by the pledge are:

- to reduce the number of working days lost per 100 000 workers from work-related injury and ill-health by **30% by 2010**;
- to reduce the incidence rate of fatal and major injury accidents by **20% by 2010**;
- to reduce the incidence rates of cases of work-related ill-health by **20% by 2010**; and
- achieve **half** the improvement under each target by 2004.

Further information can be obtained from The British Ceramic Confederation, Federation House, Station Road, Stoke on Trent, ST4 2SA.

The main causes of injury

The pie chart below uses accident statistics from the years 1996-2000 to set out the main causes of accidents in the ceramics industries as a whole.

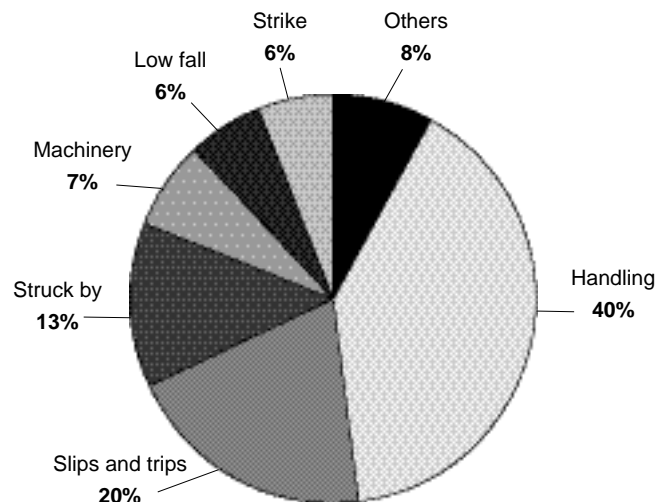


Table 1 breaks down the information contained in the pie chart. Definitions of major and over-3-day accidents can be found in the HSE leaflet *RIDDOR explained* (see 'Further reading').

Significant accident factors and priorities for action

Table 2 lists common causes of accidents in the Health and Safety Commission **priority programmes**: falls from heights; workplace transport; musculoskeletal disorders and slips and trips. It outlines preventative measures that can be taken. Major improvements in these areas are necessary in order to meet the Revitalising Health and Safety targets.

Table 3 lists common causes of plant and machinery accidents within the ceramics industry.

Table 1 Causes of major and over-3-day accidents in the ceramics industry

Causes	Major accidents			'Over 3-day' accidents		
	Ceramics	Bricks and heavy clay	Refractories	Ceramics	Bricks and heavy clay	Refractories
Handling	11%	7%	12%	48%	44%	40%
Slips and trips	34%	15%	24%	21%	17%	15%
Struck by	13%	23%	27%	10%	12%	16%
Machinery	12%	18%	11%	5%	5%	7%
Low fall	10%	21%	12%	3%	8%	5%
Strike	7%	3%	3%	6%	6%	7%
Other	13%	13%	11%	7%	8%	9%

Table 2 Major causes of accidents in the ceramics industry and priorities for action

Cause	Significant factors	Priorities for action
Falls from heights	Falls through fragile roofs (including drier roofs)	<ul style="list-style-type: none"> ● Erect fragile roof warning signs at roof access points ● Assess the fragility of roofs before work commences; if in doubt treat as fragile unless confirmed otherwise ● Pay particular attention to roof lights ● Work should be carried out by competent persons ● Supervise your own staff and monitor contractors ● Provide a platform or covering over the fragile material to support the weight of the person and any load they are carrying ● Guard-rails should be erected where people can fall more than 2 m or can fall any distance likely to cause injury ● Consider the use of mobile elevating working platforms (MEWPs)
	Fall from or the collapse of brick stacks	<ul style="list-style-type: none"> ● Avoid the need for access onto brick stacks. Where access is required and people may fall a distance likely to cause personal injury, provide protection
	Collapse of work platforms and the use of incorrect means of access	<ul style="list-style-type: none"> ● Provide a safe means of access ● Working platforms should be erected, used, inspected and dismantled by competent persons ● Guard-rails should be erected where people may fall a distance likely to cause personal injury
Workplace transport	Trapped between load/pallet and vehicle, eg fork-lift truck	<ul style="list-style-type: none"> ● Only allow trained drivers to operate vehicles and fork-lift trucks ● Train drivers on the vehicles they use and provide periodic refresher training ● Eliminate or reduce the need for vehicles to reverse ● Segregate vehicle and pedestrian routes ● Supervise vehicle use around the workplace and monitor driver and pedestrian behaviour ● Wear high-visibility clothing in areas where pedestrians and heavy vehicles are present
	Unsteady load or overloaded vehicle	<ul style="list-style-type: none"> ● Handle goods and unload vehicles using safe working practices ● Provide training and awareness in loading vehicles safely

Cause	Significant factors	Priorities for action
Musculoskeletal and upper limb disorders	Lifting and stacking including bricks, wet clay and heavy moulds	<ul style="list-style-type: none"> ● Where practicable, mechanise handling or eliminate the need for manual handling ● Carry out risk assessments of all manual handling operations and act upon findings ● Risk assessments should be carried out by a competent person ● Avoid lifting heavy items ● Avoid lifts which involve reaching too high, too low or too far ● Avoid temperature extremes and draughts ● Avoid sharp lifting and pulling movements ● Where lifting is necessary, rotate tasks so lifting is not continuous ● Train all employees in correct manual handling procedures
	Manoeuvring of pallet trucks and kiln cars	<ul style="list-style-type: none"> ● Avoid sharp lifting and pulling movements ● Ensure flooring is even ● Ensure routes are clear of obstacles and well marked ● Inspect and maintain kiln cars and pallets regularly
	Upper limb disorders	<ul style="list-style-type: none"> ● Provide regular breaks where tasks are repetitive ● Vary tasks to provide changes in activity ● Provide adjustable workstations where appropriate ● Consider ergonomic factors when designing workstations ● Train workers in proper posture and good methods of working
Housekeeping (including slips and trips)	Trips	<ul style="list-style-type: none"> ● Improve design, layout and housekeeping of the working environment ● Ensure flooring is even ● Provide adequate lighting ● Provide designated walkways and keep them free of obstacles ● Clean effectively, preferably out of hours ● Avoid horseplay
	Slips	<ul style="list-style-type: none"> ● Avoid spillages and leakage on floors ● Clear up spillages and dry the floor immediately ● Check conditions of stairs, particularly for slipping risks and provide adequate handrails ● Dry floors after cleaning
	Unsecured or worn racking	<ul style="list-style-type: none"> ● Secure storage racks ● Do not overload racking ● Protect racking from damage and inspect regularly ● Do not use damaged pallets or racking

Table 3 Major causes of plant and machinery accidents in the ceramics industry and priorities for action

Cause	Significant factors	Priorities for action
Plant and machinery	Unsafe/incorrect operation of machinery, eg guarding inadequate or removed	<ul style="list-style-type: none"> ● Guard machinery properly to avoid danger during normal use ● Interlock frequently opened guards ● Set machinery with guarding in place or with machine switched off, isolated and stationary ● Train operators and supervisors in safe methods of working ● Inspect guards regularly to ensure they operate properly
	Removing blockages from machinery	<ul style="list-style-type: none"> ● Clear blockages with guarding in place or with machine isolated and stationary ● Develop and implement a safe system of work ● Perform risk assessments before work starts ● Use a permit-to-work system for locking off machinery
	Cleaning and maintenance of machinery	<ul style="list-style-type: none"> ● Clean machinery with guarding in place or with machine isolated and stationary ● Develop and implement a safe system of work ● Inspect machinery regularly to identify any defects ● Report and record all defects to an appropriate person

Ill health - priorities for action

Ill health statistics are based on low levels of reporting. From the information available, the following are priorities for action.

- Avoid hazardous, very physical and repetitive manual handling operations, assess the risk of injury from manual handling that cannot be avoided and reduce the risk of injury.
- Assessments under the Control of Substances Hazardous to Health Regulations should assess the level of exposure within the workplace.
- Ensure that control measures, eg local exhaust ventilation, are properly designed, used, inspected and maintained, and that good standards of housekeeping are maintained etc.
- Atmospheric sampling can be performed to compare exposure levels with the legal limits.
- Carry out a lead assessment in the pottery industry where low-solubility glazes are used.
- In the case of lead, implement medical surveillance where an appointed doctor requires it or employees are likely to be significantly exposed (ie where any employee is or is liable to be exposed to half the lead in air standard or where there is a substantial risk of ingesting lead).
- Where employees are handling substances known to cause dermatitis, in addition to all necessary precautions, appoint a responsible person to carry out monthly skin inspections. The person should be trained to recognise symptoms of dermatitis.
- Where personal protective equipment is used, ensure it is sufficient for its purpose, properly worn, inspected and replaced at appropriate intervals.
- Ensure employees are adequately trained and instructed in the likely health risks and how to minimise them by taking the necessary precautions.
- Implement health surveillance (by a competent person) where there are previously known cases of work-related ill health, reliance is placed on PPE as an exposure control method and there is evidence of ill health in similar jobs in the industry, if:
 - the work concerned is known to damage the health in some particular way; and
 - there are valid ways to detect the disease or conditions; and
 - there is a reasonable likelihood that the damage to health may occur under the particular conditions.
- Introduce the correct type of health surveillance. A doctor does not necessarily have to be directly involved in carrying out procedures. Their role may be supervisory or advisory. Seek the advice of an occupational health professional if in doubt.
- Encourage employees to take part positively in health surveillance programmes.
- Ensure all reasonably practicable measures are taken to reduce noise levels.
- Where hearing protection is required, ensure it is properly selected, maintained and used.

Further reading

Control of exposure to silica dust in small potteries Ceramics Information Sheet CEIS2 HSE Books 2001

General access scaffolds and ladders Construction Information Sheet CIS49 HSE Books 1997

Health surveillance: A ceramics industry booklet IACL100 HSE Books 1996 (single copy free)

Introducing the Noise at Work Regulations: A brief guide to the requirements for controlling noise at work Leaflet INDG75(rev) HSE Books 1989 (single copy free or priced packs of 15 ISBN 0 7176 0961 8)

Managing vehicle safety at the workplace: A short guide for employers Leaflet INDG199 HSE Books 1995 (single copy free or priced packs of 10 ISBN 0 7176 0982 0)

Manual packing in the brick industry Leaflet INDG332 HSE Books 2000 (single copy free)

Picking up the pieces: Prevention of musculoskeletal disorders in the ceramics industry HSE Books 1996 ISBN 0 7176 0872 7

Preventing slips, trips and falls at work Leaflet INDG225 HSE Books 1996 (single copy free or priced packs of 15 ISBN 0 7176 1183 3)

RIDDOR explained: Reporting of Injuries, Diseases and Dangerous Occurrences Regulations HSE31(rev1) HSE Books 1999 (single copy free or priced packs of 10 ISBN 0 7176 2441 2)

Working on roofs Leaflet INDG284 HSE Books 1999 (single copy free)

While every effort has been made to ensure the accuracy of the references listed in this publication, their future availability cannot be guaranteed.

Further information

HSE priced and free publications are available by mail order from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA Tel: 01787 881165 Fax: 01787 313995 Website: www.hsebooks.co.uk (HSE priced publications are also available from bookshops.)

For information about health and safety ring HSE's InfoLine Tel: 08701 545500 Fax: 02920 859260 e-mail: hseinformationservices@natbrit.com or write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG. You can also visit HSE's website: www.hse.gov.uk The Metals and Minerals web address is www.hse.gov.uk/fod/metalmin.htm

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

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