

## Accident rates fall

UK Cement Industry Incidents (Contractors and Employees)			
	2003	2004	2005
Number of incidents where employee/ contractor was unable to work next shift.	101	85	77
Fatal incidents.	0	1	1

These incidents happened at Buxton Lime, Castle Cement, CEMEX and Lafarge sites. The figures also include lorry drivers who had incidents on customer sites.

Tragically, three fatal incidents have occurred since 2003. In 2004, a contractor fell 11 metres within a pre-heater tower, in 2005 a forklift driver was crushed by his vehicle, in May 2006 a contractor was killed.

Overall incident numbers are steadily reducing, although everybody's efforts are required, if the industry is to meet targets agreed in 2003. BCA therefore

asks you to;

- Comply with your company's safety rules.
- Not to walk past unsafe acts (or situations) without doing something.
- Keep your work area clean and tidy.
- Report hazards.
- Look out for your own and your workmates safety.

All incidents are preventable and everyone should return home, alive and well after work.

## Tanker explosions!



Since the beginning of 2005, three tanker explosions have occurred, after several years without incident.

In an incident on a Tarmac site in 2005, pictured above, four people were

knocked to the ground and ten tonnes of cement were released. A further incident occurred at a CEMEX site in 2006 and two drivers were injured.

The causes of the incidents are being investigated and company procedures for tanker inspections are being reviewed. BCA will be producing best practice guidance based on the reviews.

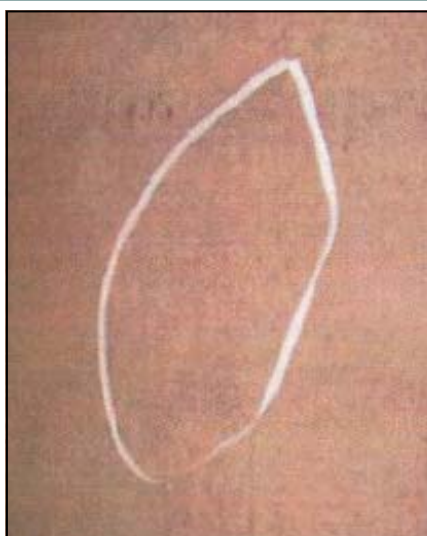
**In the meantime, drivers are reminded to check tankers for damage before discharging, as even what appears to be minor damage, can seriously affect the structural integrity of the tanker vessel.**

## Slips, trips and falls

Cement industry production operatives, contractors and delivery drivers suffer a disproportionate number of slips, trips and falls.

In a nine month period in 2005, employees suffered nine broken bones, 14 sprains and strains, two facial injuries, burnt hands and other injuries from slips, trips and falls. Actual incidents include:

- Tripped over protruding metal in workshop, injured wrist.
- Slipped in muddy conditions at customer site, broke bone in hand.
- Slipped on ice and tore ligaments in foot.



Plastic tie that caused a broken wrist

- Stepped on stone and sprained right ankle.

- Bruised back after falling over steelwork whilst attempting to free restraining strap.
- Fell when descending stairway and injured shoulder. (Not holding handrail).
- Tripped over cement bag that was buried in a pile of cement!
- Tripped over plastic tie.

Strangely, the plastic tie incident was repeated on a concrete site when an employee fell and broke his wrist after his feet became entangled in the plastic tie pictured.

If sites were kept tidy and handrails were used properly, the majority of these incidents would have been avoided.

## Spot the difference?



Before



After

BCA Guidance on how to avoid slips, trips and falls is being implemented at UK cement works.

Posters have been prepared and work teams are in the process of cleaning up work areas. Perhaps you recognise the before and after picture opposite!

Other recommendations are also being implemented through company safety procedures.

## Beware flying objects!

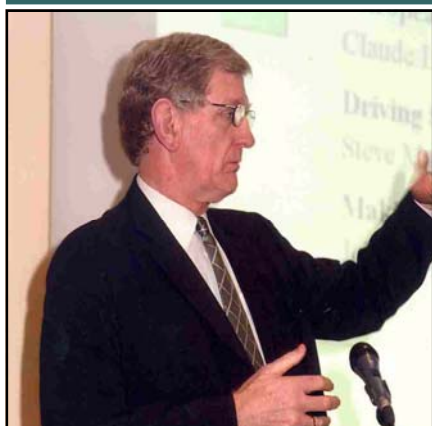
Between January and September 2005; flying, moving or falling objects led to three broken bones, two facial injuries and a number of other injuries.

Causes of being struck by an object were:

- Falling refractory linings.
- Falling ladders.
- Falling document folders and cb radios that had been inadequately secured in lorry cabs.
- Out of control winch handles.
- Jammed doors suddenly releasing.
- A propped metal plate falling over.
- An overturned tractor unit.

Items in cabs should be appropriately secured and potential risks should be reviewed before any action is taken.

# Cement Industry Conference



John Spanswick delivers zero tolerance presentation

The BCA Revitalising Health and Safety conference held in

November 2005 was attended by over 100 people.

Presentations were received on best practice in the cement industry including slips, trips and falls, hot meal burns, transport safety and the use of cameras on cement tankers. The Health and Safety Executive also provided advice on how to ensure safety systems remain robust.

The key note speech was delivered by John Spanswick, the chairman of Bovis Lend Lease and now also a Health and Safety Commissioner.

Essentially, he would not walk past an unsafe act without challenging the behaviour of those concerned. This even extended to out of work incidents involving window cleaners.

A workshop was also held to identify ways in which health and safety could be improved in the cement industry. The recommendations from the workshop are detailed below.

## Conference recommendations

### Workshops

Conference delegates recommended that health and safety workshops should be held to share best practice.

Therefore, the first workshop is being organised on kiln liner repairs as a number of contractors were injured last year when kiln liners were removed. Typically these involved contractors being struck by falling refractory material.

Issues to be tackled include

- safety during refractory removal,
- interaction with other tasks,
- communications,
- maintaining health and safety motivation,
- repairs,
- and the housekeeping/safety interface.

The workshop will be held at a cement works and numbers will be limited so that a full discussion can be held. If there is sufficient demand the workshop will be re-run at another location.

A flyer will be circulated shortly, although potential attendees can register interest and any specific issues they wish to discuss by contacting Ian Gibson at the BCA. (01276 608719 or [igibson@bca.org.uk](mailto:igibson@bca.org.uk))

### Communication

Conference delegates complained that they were not always aware of what other sites were doing on health and safety. They also did not know who to approach in other companies for advice on how to tackle a specific health and safety problem.

BCA will therefore be setting up a communications network so that sites can share best practice and

will be identifying experts in particular areas.

### Workforce involvement

Drivers within the industry suffer a disproportionate number of incidents, particularly slips, trips and falls. Whilst the BCA Customer Site Safety Scheme should reduce these incidents, it was recommended that drivers should be involved more closely in health and safety.

Consequently, companies are undertaking driver safety initiatives, for example by holding joint operational and logistic safety meetings.

It was suggested that better use could be made of union health and safety representatives. Other industries are now being examined to determine how this can be achieved.

# Fatality at Ribblesdale

## Background

Ian Bradley was an experienced fitter employed at Castle Cement's Ribblesdale Works. He was just three weeks away from retirement when he died following a forklift truck incident.

The local press reported from the inquest that *"the 59-year-old father, who was a well-known amateur sports coach, left the vehicle's engine running, the gearstick in the drive position and only partially activated the handbrake when he got down from the truck to move something on the*

*metal racking.*

*...Mr Bradley was then pinned to the shelves in front of the truck when the vehicle moved forward. He died from crush injuries to his chest.*

*...forklift driver training instructs people to always lower the forks, put the gearstick into neutral, turn the engine off and remove the keys every time the vehicle is parked"*

*The inquest heard that Ian had attended and passed his forklift driver refresher training only two weeks before the accident."*

Tragically, at the time of the accident, the safety procedures that had been taught were not implemented.

## Forklift safety

A number of factors come together to cause inherent dangers for forklifts;

- Weight; a fully loaded forklift can weigh six tonnes which is equates to four family cars.
- Loads; usually unsecured.
- Stability; narrow wheel base/ variable centre of gravity.
- Pedestrians; often in vicinity.
- Driver attention; divided between balance/ direction of travel and various controls.

HSE analysed 1069 serious injury incidents that included 53 fatalities between March 1997 and April 2001. The main causes were:

- Overturning due to the
  - use of untrained drivers,
  - wheels sinking into ground (excavations/ruts),



Fatal incident caused when forklift reversed over side of weighbridge. The drop was only a few inches high.

- gradients,
- overloads after the boom was extended,
- loads shifting,
- collisions,
- adverse weather,

- brake failure and
- failure to apply handbrake.

Other incidents were caused by:

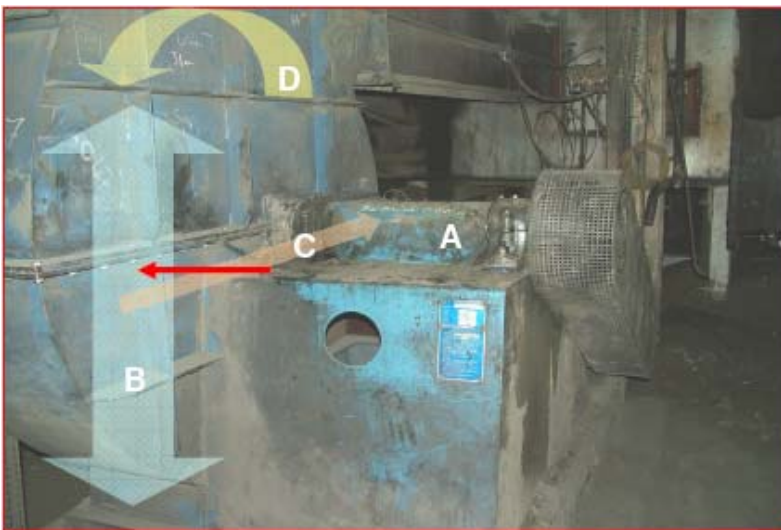
- Collisions with pedestrians.
- Falling objects.
- Slips/trips and falls from forks.
- Collisions (with vehicles, walls, and lintels).
- Trapping after dismounting from vehicle (and vehicle continued to move).
- Trapping in the lifting mechanism. (Five fatal incidents were caused by drivers climbing between the mast and overhead guard).

# CEMEX Safety Alert

## Serious injury whilst preparing for maintenance

One of CEMEX's maintenance employees ended up in intensive care following an accident where he suffered a blow to his abdominal region whilst trying to immobilise a fan drive shaft. The fan had been electrically isolated but was turning in a reverse direction due to back-draft from the process. The injured man was working with a colleague to stop this movement so that a shaft bearing could be replaced.

It is believed that the injured person was attempting to fit a 900mm pipe wrench to the shaft, whilst his colleague was using a wooden wedge to slow down the rotation of the shaft through friction. It appears that the jaw of the wrench snagged the rotating shaft at an angle and as a result the wrench handle deflected into the employee's body.



The photograph shows the layout of the area. At the time of the incident the guard **A** was removed.

The injured man was standing in position **B** and it appears that the pipe wrench **C** was in the position indicated.

The fan was rotating in the direction **D** shown

The red arrow shows a possible direction of impact.

## Learning Points

The incident investigation is continuing, however at this stage the following must be considered:

- **An improvised method was being used to stop the rotation of the shaft.**

Do our risk assessments consider all foreseen maintenance activities and ensure that appropriate precautions are in place, utilising engineering methods where possible? Do we consistently undertake risk assessments for new or unusual tasks, or when a routine job runs into difficulties?

- **A pipe wrench was used near rotating equipment.**

Are employees aware that we should not undertake maintenance on moving machinery? Do maintenance staff use properly designed safety restraints to stop and prevent shaft rotation during maintenance?

- **Has this problem arisen before?**

Are we using our Near Miss / Hazard Alert process to resolve rare but recurring and potentially hazardous maintenance tasks?

## Key Issues

- **Use the right, well maintained, tools/equipment for the job. Never make do.**
- **Never work on live or moving machinery – always “lock out”.**

## An inspector calls ?

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Over the next 12 months Health and Safety Executive Inspectors will be focusing on the following issues in the workplace;

- slips and trips,
- falls from height,
- dermatitis,
- asbestos,
- transport,
- and vibration.

In particular quarries and cement works may be affected by the work at height campaign planned for May – June 2006. Site visits will be conducted by Health and Safety Advisory Officers and Inspectors and will focus on working at height above and below two metres.

The Health and Safety Executive Intervention Programme will be looking at machinery breakdown, shut down procedures for maintenance and dealing with

blockages in certain categories of dangerous machines.

Inspections made in response to accidents and ill-health will continue as usual. Inspectors will also take the opportunity to pick up on the issues highlighted opposite whilst on the premises and to deal with matters of evident concern.

The plan commenced in April 2006 and is available via the HSE website. <http://www.hse.gov.uk/aboutus/plans/index.htm>

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## PLEASE HELP!

We need your contributions - articles, stories and letters.

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In future editions of this newsletter, the intention is to include articles and stories from within the cement industry. The aim is to share experience so that others can learn from things that improve health and safety and, equally importantly, learn from incidents that occur on other sites.

Please forward any articles or stories for inclusion in future editions to

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