

IChem^E

**S&LP
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**SAFETY & LOSS
PREVENTION
SUBJECT GROUP**

Newsletter

ISSUE 2

SPRING 1994

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HAPPY NEW YEAR

I know its a little late for new year greetings but this is the first chance that I have had, as this is the first newsletter of 1994 and the second for the Safety and Loss Prevention Subject Group. I hope that you enjoyed the first issue.

In the first issue we gave a competition to design a Logo for the newsletter. Only two enteries were received - and both of these were from committee members. To avoid being accused of fixing, a winner was not chosen from these and the competition deadline has been extended.

As there are only two entries to date, the chances of winning will be quite good - remember the prize is a £25 IChemE book 'token' for the winner. The winner will be announced in the Summer edition of the newsletter.

Any entries for the competition, or contributions such as articles, fillers and letters to the Editor before 9th June 1994 to be included in the Summer Edition.

Gary Pilkington ----- Newsletter Editor

S&LPSG Meeting - 16th September 1993

S&LPSG Meeting - 1st December 1993

Risks in Heavy Lifting Operations

The highlight of the I.Chem.E Subject Group meeting held at Foster Wheeler, Reading was Ken Standing's dynamic presentation on the practical aspects of heavy lifting. Ken's experience of over 25 years in this field and as Foster Wheeler's Principal Specialist Consultant Construction Engineer was invaluable, in demonstrating how to safely overcome even the toughest and most teasingly difficult construction lifting problems.

Significant topics were presented by speakers from the HSE Graham Morrison (HSE Offshore Safety Division) covered lessons to be learnt by the onshore process industries from offshore experience. The included wire rope problems, communications and maintenance difficulties. David Butterworth (HSE Technical Division) focused on the impact of UK and European Standards on the design and use of heavy lifting equipment. For instance, more responsibility is now placed upon the Employer for safeguards and training, and for proper maintenance and inspection.

A revealing presentation entitled "How Safe is Your Crane?" was presented by Chris Ellis of BAeSEMA filling in for a colleague at very short notice. Chris addressed the methodology in quantifying the risks for operating a crane. He summarised how risk analysis can be performed with well established loss prevention techniques, including the use of detailed fault tree analysis for determining likelihood of events.

Two corporate construction videos were excellently narrated by Alan Jackson of Grayston, White and Sparrow. He related the experiences of British Steel with the Sizewell B nuclear power station containment building.

Applications for this seminar were oversubscribed. For those who couldn't attend additional notes on the presentations are available from the I.Chem.E Library and Information Service in Rugby, Tel. UK 0788 578214.

Simon Turner.

The Cost of Major Incidents

This I.Chem.E Subject Group Meeting, organised by Gordon Atkinson and chaired by John Gillett was held at the Bowring Buildings, London.

Opening with a presentation on Insurance and Protection Costs was Mike Briggs (Bowring, Marsh & McLennon). Mike used a case study of a building fire to outline the cost of protection options. These costs are features to consider before carrying out Risk Assessment / Management prior to Insurance. Quantitative audits can be useful as an aid to determining premiums. If underwritten losses expand further into loss of market share and environmental damage insurance premiums could rise.

Mike Wendess (BP) discussed the impact of incidents on offshore operations. Some interesting expenditure figures supported the view that retrospective (after an incident) safety and prevention reviews can be very expensive. Safety cases prepared during design are not only much cheaper than a retrofit but the benefits of preventing accidents are quite evident.

A suitable focus on how to achieve cost benefits was presented by Mike Hough (BP) which included:

The total costs of control involve many components.

Refinery major accidents are increasing (due to their age, complexity, extended maintenance intervals and demanding).

Risk management techniques involving QRA can reveal priorities and aid cost effective resource allocation.

Andrew Franks (HSE - MHAU) described his own view of how individual disasters had been a catalyst for changes in regulations. Case studies demonstrate that disasters lead to additional or stricter regulation which is reflected in engineering and preparation of safety case costs.

The most memorable session, however, was an emotionally charged presentation by Peter Spooner, Deputy Chairman of the Herald Families Association (HFA). HFA members have all lost somebody in the P&O Herald of Free Enterprise Disaster. The HFA's work is not a litigation exercise but it is trying to obtain justice and prevent further disasters like theirs.

One of the HFA's means to do this is to pursue changes in the Law to establish legal, corporate and director responsibility for safety. As some readers will know, they have won a landmark case by proving that a company can commit manslaughter. The campaign now focuses on establishing responsibility at director level, in law; lifting the burden on the plaintiff to prove an individual director was at fault. It was also pointed out that criminal investigations are not required (in law) to begin after a large scale accident. This does beg the question - why?

Vic Marshall was unable to present his own paper on Disasters, Counting the Cost due to illness. Gordon Atkinson presented the salient points including ranking of disasters and the factors affecting their magnitude, concluding that a disaster scale (or scales) might be useful in weighting and measuring costs.

Summing Up

A poor safety record is bad business

If there are further changes in the law on corporate responsibility, companies who carry unacceptable risks, even unknowingly, will pay very high costs.

The Subject Group gratefully acknowledge the complimentary presentation and catering facilities provided by Bowring, Marsh & McLennon.

Additional notes on presentations made at this meeting are available from the I.Chem.E library and Information service in Rugby.

Simon Turner

Future Meetings

Accident Investigation

Venue: UC London (Engineering Faculty - Room 309)

Start Time :10.00 am.

Price: £40 (£45 for non-members)

For further details fax Simon Waldram on 081 905 1281.

A number of speakers - consultants, expert witnesses, the legal profession and the HSE have agreed to give their views as to how an accident investigation should proceed and what can be achieved. A variety of fire and explosion case studies (including forensic investigations), will be discussed.

Inherent Safety

11th May 1994

Venue: Winnington Hall Club, ICI Northwich

Price: £30 (£35 non-members) including lunch

Further details from John Bond on 043 871 725

A number of speakers - including David Mansfield and Malcolm Preston - discuss the pros and cons of trying to operate inherently safe processes.

Those wishing to attend the above meetings should send the appropriate fee to:

Simon Turner, Foster Wheeler Energy, Station Road, Reading.

Striking a Balance Between Safety and the Environment

1st July 1994

To be held at BP, Grangemouth. Programme to include a visit of the works and the SLPSG AGM. Further details to be included in the Summer Newsletter or from Iain MacKay on 041 848 3232.

LETTERS

A POOR SYSTEM OF WORK

A construction worker was wearing a plastic protective suit, supplied by breathing air, when the air supply suddenly stopped. Fortunately he was rescued without injury. A mechanic had isolated the breathing air supply in order to change the filter.

The plant had what they thought was a good system of work: before anyone used breathing air or did any work on the air system they were supposed to tell the control room. Unfortunately the supervisor and the stand-by operator both thought that the other was going to do so. The mechanic did contact the control room before starting work but the control room staff told him that no-one was using breathing air. To make sure both the mechanic and someone from the control room had a look round but the check was rather casual as neither of them expected to find anyone. The air was in use in an out-of-the-way part of the site and neither of them noticed the job.

The system of working was not really very good. No work should be allowed on the breathing air system (or any other system) without a permit-to-work, as people will say OK with less thought than they will sign a form. Users of breathing air should sign a book in the control room or collect a tag, not just tell someone they are going to use the air.

Trevor Kletz.

Our thanks to Trevor Kletz for passing on the above item from a US Department of Energy publication - Occupational Safety Observer. The above account is based on a report in volume 2, No 9, September 1993 which also contains accounts of a fatal accident in a confined space as a result of water hammer in a steam main; of an electric shock because of someone drilling a hole in a wall; and of an LPG cylinder that was overfilled and left in the sun, fortunately it relieved through a safety valve (I know of an incident where a LPG cylinder was 'relieved' and the gas/liquid ignited causing severe injury and damage - Ed.).

NOTICEBOARD

Large Scale Testing

Keith Cassidy (HSE), member of the Subject Group Committee, recently visited the US Department of Energy's large scale test facility in Nevada, to discuss possible collaborative experimental work (eg on large spills of dangerous substances). Keith would be happy to discuss aspects of this visit with members with interests in this area, particularly with those who identify significant areas of uncertainty in current knowledge which could be addressed by work involving this major facility; especially (but not necessarily) those who would be prepared to collaborate, either technically or financially on any such projects.

Keith can be contacted at HSE's Bootle HQ (St Annes House, Stanley Precinct, Bootle, Merseyside - 051-951-4758)

Having Problems With VAT?

In Warren, Michigan, an employee died when he fell into a vat of gravy being prepared for a chain of fast food restaurants.

In El Dorado, Arkansas, a plant worker entered a vat containing chopped chicken to free a blocked valve. He was wearing a gas mask but detected the smell of ammonia and started to climb out. He fell back into the vat and another man, most probably without a mask, was also overcome by the gases. Both men died.

In Toronto a worker fell into a vat of pizza dough and was asphyxiated.

In Deer Park, New York, a vat containing molten lipstick fell over onto a worker and killed him.

Thanks to John Bond for supplying these VAT incidents to the newsletter. They make a visit from the taxman almost welcome in comparison. If you have any similar incident, please share them with us.