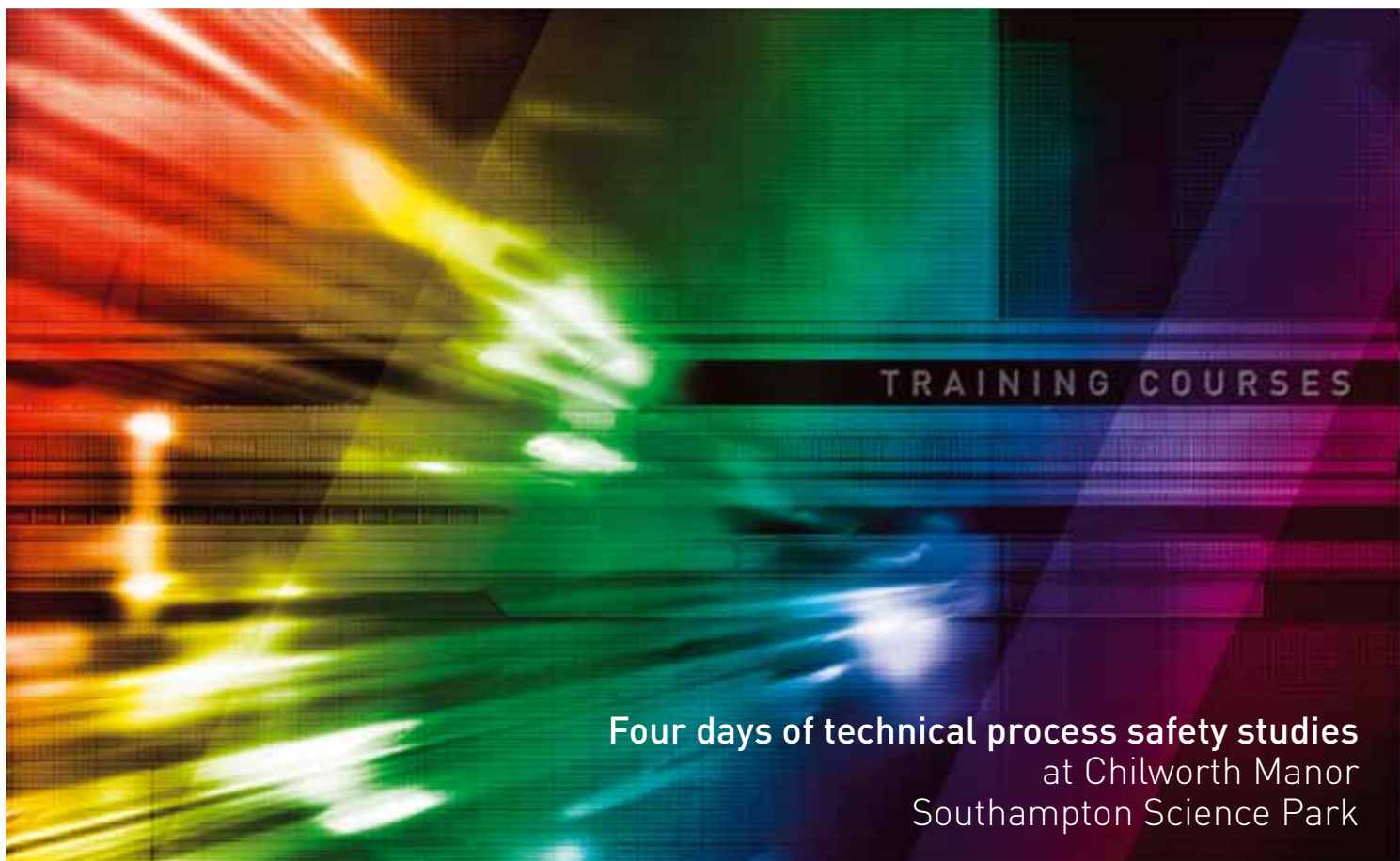


Process Safety Training Event



Dust, Gas & Vapour Explosion Hazards

22nd September 2009, 9am-5pm

(registration at 8.45am)

Hazardous Area Classification

23rd September 2009, 9am-5pm

(registration at 8.45am)

Industrial Electrostatic Hazards

24th September 2009, 9am-5pm

(registration at 8.45am)

Non-electrical (Mechanical)

Ignition Risk Assessment

25th September 2009, 9am-3pm

(registration at 8.45am)

Chilworth
GLOBAL

DAY 1 DUST, GAS & VAPOUR EXPLOSION HAZARDS

22nd September 2009

Although the principles of explosion prevention and protection are well known, dust and gas explosions still continue to occur in process plants. This course provides guidance on the selection of an appropriate basis of safety for a particular situation. We will consider how flammable atmospheres arise, how to identify potential ignition sources and the test data you need to undertake a risk assessment. We will also address explosion protection measures for cases where flammable atmospheres and ignition sources are unavoidable. The course provides practical techniques and relevant case histories.

YOU WILL LEARN:

- The requirements of current legislation
- How flammable atmospheres arise
- Which flammability characteristics are needed for assessment and control of explosion hazards
- How to identify potential ignition sources
- How the appropriate control of gas, vapour and dust explosion hazards is essential for compliance with current legislation
- What measures can be taken to prevent and protect against explosions

WHO WILL BENEFIT:

- Health & Safety Personnel
- Engineering Personnel
- Plant/Operations Personnel
- Regulatory Compliance Staff
- Employees working in hazardous areas

SPECIAL FEATURES:

- Workshop on explosion risk assessment and specification of prevention and protection measures

(For delegates attending Day 1 only, a lab tour can be arranged upon request)

DAY 2 HAZARDOUS AREA CLASSIFICATION (HAC)

23rd September 2009

Hazardous area classification uses a systematic approach to identifying flammable atmospheres and their persistence. In this way you can classify areas of your site for various levels of risk.

This course presents current best practice and procedures for carrying out a HAC for flammable gases/vapours and dusts on your plant. It also provides an understanding of how HAC fits into compliance for current legislation.

YOU WILL LEARN:

- How HAC is the cornerstone of compliance with current legislation
- About flammability and physical properties and their application to HAC
- The different techniques for performing gas, vapour and dust hazardous area classification and the relevant standards
- What information and documentation is needed for carrying out HAC
- The rules for selecting equipment in hazardous areas

WHO WILL BENEFIT:

- Health & Safety Personnel
- Engineering Personnel
- Plant Personnel
- Regulatory Affairs Staff
- Employees working in hazardous areas

SPECIAL FEATURES:

- Workshops: Hazardous Area Classification of flammable liquid/ vapour
Hazardous Area Classification for flammable dust
(For delegates attending Day 2 only, a lab tour can be arranged upon request)

Process Safety Training Event

Chilworth Global

Established in 1986, Chilworth Global is an international Group of companies providing worldwide services to industry in the field of process safety.

Chilworth Global has international consulting bases in the USA, Italy, Spain, The Netherlands, Ireland, France and India, with laboratories in both Southampton Science Park (Southampton, England) and Plainsboro (NJ, USA).

The client base of Chilworth Global covers 50+ countries and includes national and multi-national manufacturing companies in the chemical, pharmaceutical, oil, petrochemical, food, drink, agrochemical, printing, toiletry and other process industries.

Chilworth Global are experts in the field of process safety and the provision of material safety data from our state-of-the-art GLP compliant laboratories.

Four main areas of process safety are covered:

- Fire and explosion hazards
- Chemical reaction hazards
- Electrostatic properties
- Physical property regulatory testing

Our consulting staff are internationally acknowledged experts in their specialist fields and regularly speak at international forums on process safety.

They cover all aspects of process safety including explosion hazards, chemical process evaluation, vent sizing, HAZOP, incident investigation, SIL studies, expert witness, electrostatic hazards and safety training. Our instruments division also manufactures and calibrates over 100 process safety laboratory instruments.

Chilworth Global provides independent and impartial advice and a single point of contact for all your process safety needs.

DAY 3 24th September 2009 INDUSTRIAL ELECTROSTATICS HAZARDS

Electrostatic discharges are explicitly cited as potential ignition sources that must be assessed when considering the risk of fire and explosion as part of compliance with current legislation.

This course is designed to explain how electrostatic charges occur and how charge builds up in people, liquids, powders, plastics and plant. Understanding electrostatic properties is essential in avoiding electrostatic discharges which can trigger fires and explosions. The course provides practical techniques and relevant case histories.

YOU WILL LEARN:

- How electrostatic charge is generated and accumulates
- How to identify the various types of potential electrostatic discharges
- About flammability and physical properties and their application to static hazards
- The energy of different types of electrostatic discharges
- How to minimise electrostatic charge/accumulation to reduce the risk of electrostatic discharges and comply with current legislation
- Which electrostatic material properties can indicate the potential for process handling problems and hazards

WHO WILL BENEFIT:

- Health & Safety Personnel
- Engineering Personnel
- Plant/Operations Personnel
- Regulatory Compliance Staff

SPECIAL FEATURES:

- Demonstration of electrostatic charging and discharging and measurements that can be made on plant
- Workshop with relevant case histories
- Tour of the Electrostatics/Industrial Explosion Hazards Laboratory

DAY 4 25th September 2009 NON-ELECTRICAL (MECHANICAL) IGNITION RISK ASSESSMENT

The NEMIRA course will cover how to assess the ignition risk from existing non-electrical (mechanical) equipment operating in hazardous areas.

In practical terms, how do you ensure compliance for existing non-electrical (mechanical) equipment used in potentially explosive atmospheres, identified from your Hazardous Area Classification Work?

This course will seek to answer common questions relating to non-electrical (mechanical) equipment risk assessment, from clients undertaking compliance work.

YOU WILL LEARN:

- Why you need to carry out a risk assessment of existing non-electrical (mechanical) equipment in hazardous areas, what can go wrong and how that differs from electrical equipment
- The key elements to consider in carrying out a non-electrical (mechanical) equipment ignition risk assessment
- What information is required – material properties, equipment data etc.
- How to document and maintain the risk assessment

WHO WILL BENEFIT:

- Production Managers
- Engineering Managers
- Process Managers
- Safety, Health & Environment Managers
- Project & Design Engineers
- Equipment Manufacturers

SPECIAL FEATURES:

- Two workshop examples – one for gases and vapours and one for dusts

(For delegates attending Day 4 only a lab tour can be arranged upon request)

Registration is at 8.45am for a prompt 9.00am start

Courses will finish at approximately 5pm (except Day 4 which finishes at 3pm)

Workshop Tutors

Richard Montgomery BEng (Hons)

Dust, Gas & Vapour Explosion Hazards and HAC

Richard joined Chilworth Technology in 1997 and is currently a Senior Process Safety Specialist.

Since joining Chilworth Technology, Richard has worked on a number of wide ranging projects for a variety of clients throughout Europe, including the generation of an Explosion Protection Document (EPD) for ATEX compliance; Electrostatic hazard assessments for industries; handling highly flammable liquids, and ignition sensitive powders; Hazardous area classification for clients handling flammable powders, vapours and gases; HAZOP Project Leader for a working group representing Hazard and risk assessments for powders, vapours and gases.

Richard Ball

Dust, Gas & Vapour Explosion Hazards and Industrial Electrostatic Hazards

Richard has been with Chilworth Technology since its inception over twenty years ago. He ran the Industrial Explosion Hazards laboratory for the first six years and is now a Senior Process Safety Specialist. Richard regularly undertakes process safety audits for a broad spectrum of companies from food to pharmaceutical and chemical industries. He has also developed in-company standards on explosion / electrostatic hazards

Before joining Chilworth Technology, Richard worked on a multi-sponsored industrial-scale research project at the University of Southampton on electrostatic hazards of pneumatic conveying powders into silos. His specialist areas are the prevention of explosions, electrostatic hazards, hazardous area classification, and the interpretation of test data.

Ian Pavey M.Phil, BSc (hons), M.Inst.P, C.Phys, Industrial Electrostatic Hazards

Ian graduated from Bath University with a BSc in Chemical Engineering, and subsequently gained an M.Phil. in applied electrostatics

In 30 years working in the field of electrostatics, Ian has published numerous articles covering subjects from new electrostatic applications to powder handling problems to fundamental research leading to new understanding of hazardous situations. In addition, he is a named inventor on a number of patents in areas from electrostatic sprays for agricultural purposes to electrostatic fibre production for liquid crystal displays.

Call +44 (0)23 8076 0722 to confirm availability

To confirm availability, telephone Kate Gillett on **+44 (0)23 8076 0722** and email this form to kgillett@chilworth.co.uk. A location map will be sent to you with course confirmation once we receive your completed application form.

Payment may be made by a cheque payable to Chilworth Technology Ltd or an official company purchase order. Please send these to:-

Marketing, Chilworth Technology Ltd, Beta House, Southampton Science Park, Southampton, Hants, SO16 7NS

REGISTRATION DETAILS - scan and email to kgillett@chilworth.co.uk

Dr/Mr/Mrs/Ms/Miss:

Name: _____

Job Title: _____

Company Name: _____

Address: _____

Postcode: _____ Country: _____

Telephone: _____ Fax: _____

Email: _____

I am a Chilworth website subscriber and I wish to claim my 5% discount

Please tick which day you wish to attend:

- Dust, Gas and Vapour Explosion Hazard 22nd September
- Hazardous Area Classification 23rd September
- Industrial Electrostatic Hazards + Lab Tour 24th September
 - Complimentary course dinner- Evening of Day 3 24th September
- Non-Electrical (Mechanical) Ignition Risk Assessment 25th September

At Southampton Science Park, Southampton, Hants, UK

Any single full day	£199+ VAT
Any two full days	£359+ VAT
All three full days	£537+ VAT
NEMIRA	£129+ VAT
	(£99+ VAT if taken with any full day course.)

Entire Four days **£599+ VAT**

Prices include lunch (please advise of any special dietary requirements).

I cannot attend any of the above courses, but would like a FREE consultation with a Process Safety Specialist

Signature: _____ Date: _____

Cancellations: All reservations in writing are subject to cancellation conditions. Written cancellations received up to 5 working days before the course date will be subject to an administration charge of £50. No refunds will be made for cancellations received after this date, or for non-attendance, but copies of the course documentation will be sent. Substitutions may be made at any time up to the start of the course. Chilworth Technology reserves the right to modify or cancel the course up to 5 working days prior to the commencement date.

Chilworth Technology Ltd.

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