

Process Safety Academy

Training and Competence Development

DEKRA Process Safety



On the safe side.



DEKRA Process Safety
Phi House, Southampton Science Park
Southampton - Hampshire - SO16 7NS - UK.
Phone: +44 23 8076 0722
Fax: +44 23 8076 7866
training-uk@dekra.com
www.dekra-process-safety.co.uk

The global learning centre for sustainably improving process safety competency

Excellence in Process Safety performance requires the right people, with the right skills, implementing appropriately designed Process Safety programs, motivated by the right organisational culture, in the right way.

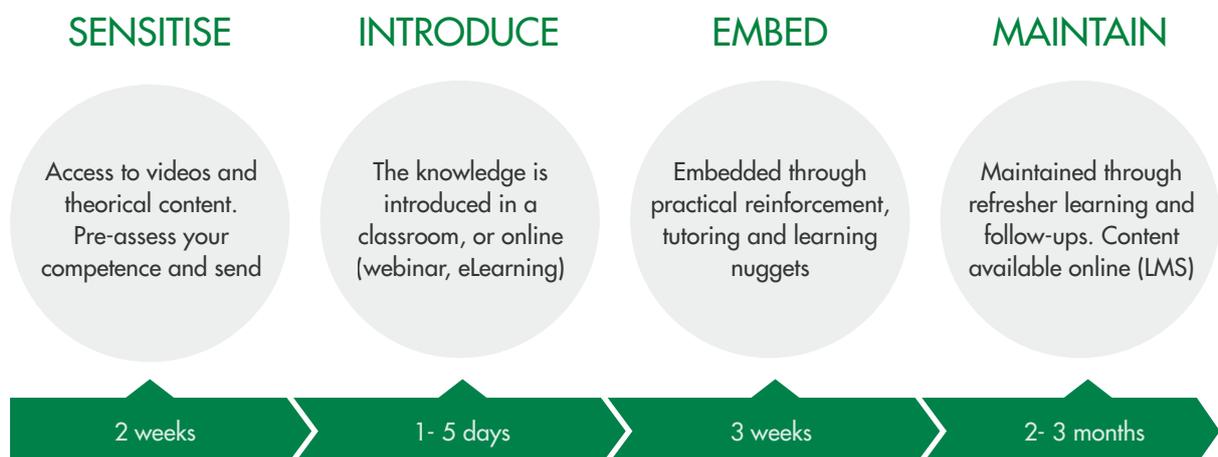
DEKRA Process Safety Academy introduces, embeds and maintains competency in Process Safety in your organisation. With more than 30 years of expertise, our highly qualified team of learning experts, senior practitioners and scientists make us the global experts in process safety who partner with you to identify and meet all your learning requirements.

Multi-level audience	Operators, Technicians, Supervisors, Engineers, Managers and Contractors
Competence levels	Awareness, Basic Application, Proficiency, Expert
Multiple languages	English, German, Spanish, French, Italian, Chinese, Portuguese, Hindi
Our training programmes are	Effective, Impactful, Globally Consistent, Sustainable
Our delivery methods	In-house, Public Courses, eLearning, Competence Development Programs
Our trainers	Highly experienced Process Safety practitioners in industry

Our Competence Development Programs

We know how to turn training into competency

Training alone does not drive competency. Humans tend to forget very quickly and can only retain a small percentage of knowledge after some weeks have passed. Real learning needs experience, support and mentoring, verification and monitoring over time. Our competence development programs are based on the important learning principles:



All to sustain the knowledge over time

DEKRA Process Safety Academy 2018

Training and Competence Development Programs

1. LEGISLATION AND REGULATIONS

SEVESO / COMAH / DSEAR / OSHA / CLP / GHS / Transportation

2. UNDERSTANDING HAZARDS

Gas & Vapour Explosion Hazards

Dust Explosion Hazards

Chemical Reaction Hazards & Thermal Stability

Ignition Sources & Electrostatic Hazards

3. HAZARD IDENTIFICATION & RISK ANALYSIS

HAZOP (Member/Leader)

Process Hazard Analysis (HAZID, What-if, LOPA, FMEA)

Quantitative Risk Assessment (QRA)

Consequence Modelling and Toxic Dispersion

4. HAZARD MITIGATION AND MANAGEMENT PROGRAMS

Functional Safety Management, LOPA & SIL Assessment

Emergency Relief Systems, Blowdown & Pressure Vessels

Process Safety Management (PSM)

Process Safety Metrics & Leading Indicators

Process Safety Management System Auditing

Management of Change

Incident investigation

5. WORKING IN HAZARDOUS AREAS

Understanding Hazards and Working Safely in Hazardous Areas

Hazardous Area Classification (HAC)

Design & Selection & Maintenance of Equipment in Hazardous Areas (Advanced)

Erection & Maintenance in Hazardous Areas

Process Safety Management System Auditing

Inspection & Maintenance in Hazardous Areas



For an informal discussion on our tailored in-company solutions, e-learning or competence development programs, please call +44 (0)23 8076 0722

Practical Aspects of DSEAR Compliance Success

The flagship four day course from DEKRA Process Safety, Practical Aspects of ATEX Compliance Success, covers Hazardous Area Classification (HAC), Dust, Gas and Vapour Explosion Hazards, Industrial Electrostatic Hazards and Non-Electrical (Mechanical) Ignition Risk Assessment. The course can be booked as a complete four day package, or as individual/multiple days dependent on personal requirements.

Duration: 4 days

Type: Classroom training

In-company: Contact us

Open sessions: 13th – 16th March 2018, Southampton
11th – 14th September 2018, Manchester
20th – 23rd November 2018, Leeds

*Units can also be studied separately as single day courses, for more details on this please contact us via email or telephone.

Objectives

- To gain an understanding of ATEX/DSEAR legislation and compliance requirements
- To gain practice in carrying out hazardous area classification of gases, vapours and dusts and basics of new equipment selection
- Understand the measures available for explosion prevention and protection
- Understand how to identify and control electrostatic ignition hazards
- To gain practice in performing non-electrical equipment risk assessments

Day 1

Hazardous Area Classification (HAC) uses a systematic approach to identify 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/powders on your plant. It also provides an understanding of how HAC fits into compliance for DSEAR/ATEX.

Day 3

Industrial Electrostatics Hazards are explicitly cited as potential ignition sources that must be assessed when considering the risk of fire and explosion as part of compliance with DSEAR/ATEX. 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. This unit provides practical techniques & relevant case histories.

Audience

- Health & Safety Personnel
- Engineering Staff
- Plant Engineers
- Regulatory Staff
- Staff in Hazardous Areas

Day 2

Dust, Gas and Vapour Explosion Hazards. 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. This unit provides practical techniques and relevant case histories.

Day 4

Non-Electrical (Mechanical) Ignition Risk Assessment (NEMIRA). A short seminar on 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 seminar will seek to answer common questions relating to non-electrical (mechanical) equipment risk assessment, from clients undertaking DSEAR compliance work.

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Duration: 4 days

Type: Classroom training

In-company: Contact us

Open sessions: 24th – 27th April 2018, Dublin
19th – 22nd June 2018, Cork

*Units can also be studied separately as single day courses, for more details on this please contact us via email or telephone.

Objectives

- To gain an understanding of ATEX legislation and compliance requirements
- To gain practice in carrying out hazardous area classification of gases, vapours and dusts and basics of new equipment selection
- Understand the measures available for explosion prevention and protection
- Understand how to identify and control electrostatic ignition hazards
- To gain practice in performing non-electrical equipment risk assessments.

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Why not network with other delegates and presenters at our complimentary welcome dinner?

Day 3

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Preventing Reaction Runaway

Integrating Safety Assessment Into Process Life Cycle and Practicalities of Emergency Pressure Relief Design

The loss of control of exothermic or gas generating chemical reactions, on plant scale, can have devastating primary and secondary consequences. Strategic assessment practices should be embedded to ensure that chemical reaction hazards are systematically identified early in process development and that the development process seeks to eliminate or reduce the risk potential. This course is designed to equip staff with the necessary tools to be able to identify chemical reaction hazards, interpret test data correctly and develop a robust basis of safety.

Duration: 2 days

Type: Classroom training

In-company: Contact us

Open sessions: 20th - 21st February 2018, Southampton

*Units can also be studied separately as single day courses, for more details on this please contact us via email or telephone.

Objectives

- Develop an understanding of the impact of process development decisions on process safety risks and learn tools and approaches to develop inherently safer processes.
- Understand calorimetric and thermal stability data interpretation and application.
- Gain awareness of safety measures available for safe scale-up, including relief system design concepts.

Audience

Personnel involved with process safety, EH&S, process design, operations and maintenance from the chemical & processing industries:

- Management
- Technical
- Operations
- Maintenance

Day 1

Delegates will learn to identify significant sources of hazard in existing plants, understanding the latest techniques for assessing risk and measuring and quantifying chemical process hazards in the workplace. An understanding of established best practice in reducing the hazards of exothermic reaction systems, with particular emphasis on emergency relief design, will be taught (in conjunction with Day 2.)

Day 2

The provision of emergency relief systems for runaway chemical reactions and decompositions requires a detailed design approach that takes into account the dynamics of the uncontrolled reaction and the potential for multi-phase flow in the vent system. The DIERS (Design Institute for Emergency Relief Systems) methodology provides a practical framework for such studies, which is different to vent sizing for purely physical contingencies. This short course will examine the characterisation of runaway behaviour and the vent design approach. Data requirements, sizing equations and practical aspects will be discussed. Case studies and workshops are included.

Effective HAZOP Participation

Complex processing with inherent hazards requires systematic methods for hazard identification and assessment. Hazard and Operability Study (HAZOP) is a recognised industry-wide method for achieving this.

HAZOP is a rigorous, structured approach to identifying process hazards and operational problems, which can be adapted to a variety of processes and technologies: however the effectiveness and efficiency of a HAZOP depends on the competence of the leader as well as the competence and engagement of the HAZOP Team. This course will help participants to understand the purpose of HAZOPs and how they can make an effective contribution to them.

Duration: 1 days

Type: Classroom training

In-company: Contact us

Open sessions: 15th May 2018, Leeds

Audience

- Health & Safety Personnel
- Engineering Staff
- Plant Engineers
- Regulatory Staff
- Staff in Hazardous Areas

Day 1

Delegates will learn:

- When and how HAZOP should be employed, including how it relates to other techniques.
- What is needed to carry out a HAZOP
- How HAZOPs should be conducted
- How to use risk assessment with HAZOPs.
- There will also be an opportunity to participate in a HAZOP.

Practical HAZOP Leadership in Action

HAZOP is a rigorous, structured approach to identifying process hazards and operational problems, which can be adapted to a variety of processes and technologies: however the effectiveness and efficiency of a HAZOP depends on the competence of the leader as well as the competence and engagement of the HAZOP Team. This course will help leaders to develop the skills necessary to ensure HAZOPs are an effective and efficient way in their organisation.

Duration: 2 days

Type: Classroom training

In-company: Contact us

Open sessions: 16th – 17th May 2018, Leeds

*Units can also be studied separately as single day courses, for more details on this please contact us via email or telephone.

Audience

- Health & Safety Personnel
- Engineering Staff
- Plant Engineers
- Regulatory Staff
- Staff in Hazardous Areas

Day 1

Delegates will learn about effective leadership techniques for HAZOP studies; not only in the study itself but also in preparation and post-HAZOP management. In addition, delegates will have the opportunity to lead a HAZOP on a continuous process.

Day 2

Delegates will learn how to adapt the HAZOP technique to batch processes, computer controlled plants and other special situations, as well as what should be included in a HAZOP procedure.

Case studies will be examined, and delegates will have the opportunity to lead a HAZOP on a batch process.

Practical HAZOP Incorporating IEC61511

This training course covers HAZOP study in full with IEC61511 (and the master standard IEC61508) incorporated. Anyone wishing to use the HAZOP study in the lifecycle of safety instrumented systems (as they should) then this course shows how to incorporate the standard seamlessly and easily and how the leader can quietly ensure that everything necessary is covered.

HAZOP study is an established method for examining a process plant in detail. The standard for the central HAZOP study is IEC61882 which is a European Norm and published as EN 61882 throughout the EU. It gives guidance on application of the technique and on the HAZOP study procedure, including definition, preparation, examination sessions and resulting documentation and follow-up.

HAZOP study is included in the lifecycle in IEC61511 Part 1. If a safety instrumented system is to be, and claim to be, compliant with IEC61511 then this course has a full module describing what should be covered in the HAZOP study for SIL rated trips as safeguards.

Objectives

- Understand what data needs to be collected from the HAZOP study team who know the process often better than the SIL experts.
- Understand how to use a HAZOP to eliminate all cases that do not further review under IEC61511 or IEC61508
- Understand how to design and calibrate a HAZOP risk matrix that complies with IEC61511/ IEC61508

Day 1

The introduction starts with the status of HAZOP status in legal requirements and how HAZOP studies can be used to save money. The importance of the Seveso directive is covered as well as the incidents that led to HAZOP studies being important. The course also discusses what the purpose of reviewing a HAZOP study is. The first day then goes through the HAZOP system itself and shows that the standard suggests the size of HAZOP study team.

Duration: 2 days

Type: Classroom training

In-company: Contact us

Open sessions: 20th - 21st March 2018, Southampton

Audience

- Health & Safety Personnel
- Engineering Staff
- Plant Engineers
- Regulatory Staff
- Staff in Hazardous Areas

Day 2

The course examines what IEC61511 covers, the context within regulations and how it is clearly linked with HAZOP studies. Aspects that are appropriate for a risk matrix used in a HAZOP study that links with IEC61511 are discussed. An example HAZOP study is undertaken in which everyone participates. Special cases are discussed as well as what the final report should cover.

This course is provided by the Author of the I.Chem.E's book "Using Risk Graphs for Safety Integrity Level Assessment", a book that is now named and included in IEC61511 2nd edition Part 3.

SIL Requirements (SIL Determination)

To have a SIL rated trip is not a success but a failure. What it means is that the one SIL rated trip is essential for covering the gap between the actual risk achieved and the corporate safety target. The ideal is therefore to show that there are sufficient other layers of protection to achieve the corporate target without any gap.

The need for a SIL rated trip and the requirements for that trip is a team decision and so this training course is for process engineers and others who can identify and evaluate the other layers of protection of whatever kind and identify any remaining gap. Therefore this training course is for process engineers, mechanical engineers and others at the forefront of that assessment and not just for the instrument engineers.

The course includes exams on the content. This course explores the legal framework as well as methods of evaluation used for safety instrumented systems. The course also includes how to design and calibrate a risk graph for your company that meets the requirements of latest edition of IEC61511:3 and is presented by the author of the I.Chem.E book on the subject.

Duration: 2 days

Type: Classroom training

In-company: Contact us

Open sessions: 25th - 26th April 2018, Southampton
2nd - 3rd October 2018, Dublin

*Units can also be studied separately as single day courses, for more details on this please contact us via email or telephone.

Audience

- Health & Safety Personnel
- Engineering Staff
- Plant Engineers
- Regulatory Staff
- Staff in Hazardous Areas

Objectives

- Understand where IEC61511 and IEC61508 sit within the legal framework
- Understand how to document and evaluate all the existing layers of protection in order to identify if a SIL-rated safety instrumented system might be necessary.
- Understand that it is a team decision and who should be on the team and what they need to know.
- Understand how to design and calibrate a risk graph for the HAZOP team that provides all the information needed from those who know the process to the SIL expert who will do the LOPA confirmation calculation.

Day 1

The introduction starts with the status of IEC61511 and IEC61508. The course then shows what a SIL assessment examines and who provides the information. The candidate is reminded that to have a SIL rated system is not a success but a failure and so the objective is to show that a SIL system really is needed and that everyone understands why. LOPA is used to understand the SIL assessment and we then examine what a SIL rated loop means and covers.

Day 2

The course looks at the design and calibration of a risk graph that is actually LOPA and why that is of benefit to the risk assessment and HAZOP study teams. The importance of having a risk graph, that is based on LOPA, when it is known that LOPA will be used later for the full assessment is covered. The steps are then covered to allow the candidate to design and calibrate a risk graph suitable for their application and in accordance with IEC61511 Part 3 Annex I. We finish by looking at the importance of Functional Safety Management and the sensible way to complete the requirement.

Functional Safety Management & SIL Assessment

An introduction to IEC 61508/11 Safety Integrity Level (SIL) principles for establishing the performance, specification and reliability of Safety Instrumented System.

This course is suitable for anyone who would benefit from a broad understanding of this important safety related area and will cover the background of IEC61508/11 SIL development and its management requirements. The presentation will go on to explain SIL determination techniques such as Risk Graph & Layers of Protection Analysis (LOPA), which are common methods within the process industries. Workshops will reinforce the learning of these techniques.

Duration: 3 days

Type: Classroom training

In-company: Contact us

Open sessions: 1st – 3rd May 2018, Southampton
9th – 11th October 2018, Dublin

Objectives

Following completion of the course, delegates should be able to participate in, and contribute towards, future SIL assessments within their own workplace, appreciate the elements of safety system design and the importance of operations and maintenance management to overall safety. Extensive opportunities to discuss the various issues raised with the lecturers will be provided.

Audience

- Health & Safety Personnel
- Engineering Staff
- Plant Engineers
- Regulatory Staff
- Staff in Hazardous Areas

Day 1

The introduction will cover the background of IEC61508/11 SIL development and its management requirements and will go on to explain SIL determination techniques such as Risk Graph & Layers of Protection Analysis (LOPA), which are common methods within the process industries. Workshops will reinforce the learning of these techniques.

Day 2

The course moves onto the initial implementation phase of Safety Instrumented System (SIS) design, including system architecture, failure modes, fault tolerance, human reliability, etc., in order to achieve both performance and integrity. Familiarisation with the requirements of operational proof testing and maintenance of SIS and their impact to overall functional safety will also be addressed. The importance of management, competency, planning and conformity assessment will be highlighted.

Day 3

Based on the information presented and following completion of the course, delegates should be able to participate in, and contribute towards, future SIL assessments within their own workplace, appreciate the elements of safety system design and the importance of operations and maintenance management to overall safety. Extensive opportunities to discuss the various issues raised with the lecturers will be provided.

SIL System Maintenance

This course is for maintenance engineers who are required to maintain a SIL-rated safety instrumented system (“SIF”) and can be asked to be involved in installation and commissioning.

It covers the legal requirements for commissioning and maintenance of SIL-rated systems protecting any dangerous substance. Thus the maintenance engineer discovers what needs to be included and covered at installation, commissioning and during maintenance of the SIF. During the life of the SIF the course looks at replacement and repair activities that occur. The course also covers the relevant aspects of the management of changes as well as full and partial proof testing.

The result is that anyone involved in maintenance of a SIL-rated safety instrument understands what they need, what they can find, and what is required of them.

Objectives

- Understand what full and partial proof tests mean and their importance.
- Understand what demand rate means and what the impact is of MTTR on maintaining the loop.
- Understand what information must be obtained from the SIL-rated safety instrumented loop designer.
- Understand the legal requirements for maintaining a SIL-rated safety instrumented system.
- Understand what information must be collected during commissioning of a SIL-rated safety instrumented system.

Day 1

Module 1 - The introduction starts with the status of IEC61511 and IEC61508 and gives an understanding of what the SIL rated safety instrumented system actually covers as well as its legal status. The foundation understanding is put in place the differences between a SIF, a SIS and a SIL rating. An example reliability of an instrumented loop is considered to show that the SIL rating is the entire loop. The course now moves on to pick out important details of the design and a realisation that safety includes all the other layers of protection. An understanding is given that most safety trips should not be SIL rated and only High Integrity trips are SIL rated.

Duration: 3 days

Type: Classroom training

In-company: Contact us

Open sessions: 8th – 10th May 2018, Southampton
16th – 18th October 2018, Dublin

Audience

- Health & Safety Personnel
- Engineering Staff
- Plant Engineers
- Regulatory Staff
- Staff in Hazardous Areas

Day 2

Module 2 - An understanding of demand rate is uncovered. We then look at the important information for maintenance to be taken from the specification documents. The content now unpacks the meaning and importance of MTTR to the maintenance personnel. The course looks at installation aspects and the importance of the very first proof test at commissioning and how the proof test schedule flows from it. The course looks at regulatory requirements under DSEAR and how they impact in the UK on the commissioning and maintenance of a SIL rated system.

Module 3 - This module reviews all the requirements for installation and commissioning of the SIL rated system. Audit of the system, validation and the first full proof test at the end of commissioning are all covered as well as actions to comply with the DSEAR regulations for Dangerous Substances. The course describes what to do when errors are discovered during installation, commissioning and proof testing of the SIL rated system.

Day 3

The course looks at the design and calibration of a risk graph that is actually LOPA and why that is of benefit to the risk assessment and HAZOP study teams. The importance of having a risk graph, that is based on LOPA, when it is known that LOPA will be used later for the full assessment is covered. The steps are then covered to allow the candidate to design and calibrate a risk graph suitable for their application and in accordance with IEC61511 Part 3 Annex I. We finish by looking at the importance of Functional Safety Management and the sensible way to complete the requirement.

The Design, Development & Scale Up of Safe Chemical Processes & Operations

Developing safe processes is of paramount importance to any chemical company. Exothermic chemical reactions in batch and semi-batch processes can result in serious injury to people and plant if they get out of control. Results of thermal runaways include violent loss of containment, possibly explosion and the release of flammable or toxic materials to the environment.

This seminar is designed to enhance the awareness of chemists and engineers regarding hazard issues. Utilising the expertise of the chemists and chemical engineers at DEKRA Process Safety and Scientific Update, it will consider hazard control of new chemical processes throughout their development cycle: from early development through to full-scale production. Hazards can often be eliminated by appropriate choice of reagent or synthetic route at the R&D stage. Where this is not possible, techniques exist to quantify the hazards so that robust engineering solutions can be applied in production.

Objectives

- The ability to identify any significant sources of hazard in existing processes or development plans
- An understanding of the latest techniques for assessing risk, and measuring and quantifying chemical process hazards in the work place
- An understanding of the established best practice to reduce the hazard resulting from exothermic reaction systems with a particular emphasis on emergency relief design.

Day 1

- The Process Lifecycle
- Where hazards arise – a review of reported incidents involving runaway reactions and current legislation
- Techniques for safe process design and optimisation
- Chemical hazards assessment strategy
- Fundamental principles of scale-up and reaction runaway
- Workshop problems
- Identification of highly energetic materials
- Small scale screening tests for liquids, mixtures and powders
- Reaction characterisation through calorimetry
- Discussion

Day 3

- Selection of Safety Measures and Case Study
- Emergency relief venting methodology
- Emergency relief venting methodology - continued
- Relief system case studies
- Process control considerations (safety critical systems, Safety Instrumented Systems, ISA S84.01/IEC 61508/11, equipment reliability and maintenance)

Duration: 3 days

Type: Classroom training

In-company: Unavailable

Open sessions: 12th – 14th June 2018, Winchester

Audience

Process R&D Chemists, Production Chemists, Chemical Engineers and anyone whose responsibilities include safety or risk assessment of chemical processes or building safety into chemical process scale-up.

Day 2

- Reprise of Day 1
- Characterisation of runaway reactions using adiabatic calorimetry
- Case studies
- Flammability issues associated with chemical manufacture (including a brief discussion of electrostatic hazards)
- Depart for tour

2018 Process Safety Training Schedule

	Sessions 2018	Price
Practical Aspects of DSEAR Compliance Success	13 th – 16 th March 2018, Southampton	
	11 th – 14 th September 2018, Manchester	
	20 th – 23 rd November 2018, Leeds	1265 £ / 1585 €
Practical Aspects of ATEX Compliance Success	24 th – 27 th April 2018, Dublin	
	19 th – 22 nd June 2018, Cork	1265 £ / 1585 €
Preventing Reaction Runaway	20 th - 21 st February 2018, Southampton	890 £ / 1115 €
Effective HAZOP Participation	15 th May 2018, Leeds	615 £ / 765 €
Practical HAZOP Leadership in Action	16 th – 17 th May 2018, Leeds	890 £ / 1115 €
Practical HAZOP Incorporating IEC61511	20 th - 21 st March 2018, Southampton	890 £ / 1115 €
	1 st – 3 rd May 2018, Southampton	
Functional Safety Management & SIL Awareness	9 th – 11 th October 2018, Dublin	1130 £ / 1415 €
	25 th - 26 th April 2018, Southampton	
SIL Requirements (SIL Determination)	2 nd - 3 rd October 2018, Dublin	890 £ / 1115 €
	8 th – 10 th May 2018, Southampton	
SIL System Maintenance	16 th – 18 th October 2018, Dublin	1130 £ / 1415 €
Design, Development & Scale Up of Safe Chemical Operations	12 th – 14 th June 2018, Winchester	1415 £ + VAT *

REGISTER NOW

Course Tariff

	Regular Price (£)	Regular Price (€)
1 day	615.00 £	765.00 €
2 day	890.00 £	1115.00 €
3 day	1130.00 £	1415.00 €
4 day	1265.00 £	1585.00 €

Booking Form

Date: _____

Course Title : _____

Name : _____

Company : _____

Function : _____

Address : _____

Country : _____

Postcode : _____

Tel : _____

Email : _____

[REGISTER NOW](#)

- Claim our 5% Earlybird Discount – on bookings received 4 weeks prior to course.
- Claim a further 5% - when booking 2 or more people onto the same course.
- I would like a FREE consultation with a DEKRA Process Safety Specialist.

TERMS AND CONDITIONS

Training Registration Terms:

Payment in full is due at time of training registration. Registrations are confirmed upon receipt of payment. Substitute attendees are accepted up to the time of the start of the course.

Cancellation & Refund Policy:

Confirmed registrations may be cancelled up to 5 working days before the course date and will be subject to an administration charge of £50+VAT. No refunds will be made for cancellations received less than 5 working days before the course commencement date or for non-attendance. Copies of the course documentation will be sent to non-attendees. DEKRA Process Safety reserves the right to modify or cancel the course up to 5 days prior to its commencement date. In the event DEKRA Process Safety cancels a course, confirmed registrations shall have the right to transfer to another course within 6 months of such cancellation date.

Trainers' Biographies

Simon Gakhar, B.Sc. (Hons) C.Eng. MICHemE Professional Process Safety Engineer

Simon is a Chartered Chemical Engineer and joined the organisation in 2004 as a Senior Process Safety Specialist working in both the industrial explosion hazards and chemical reaction hazards groups. Simon is currently the Technical Manager in the process safety consultancy group with over 25 years industry experience in a range of process safety and engineering roles across a broad range of industrial sectors and disciplines, including gas, dust and vapour explosions, electrostatic hazards, chemical reaction hazards and DIERS, occupied building risk assessments, pressure relief, discharge and disposal system design and process safety management. Simon is a very experienced trainer and presenter and has a particular interest in the use of practical demonstrations in training, many of which he has developed himself.

Keith Middle, BSc, CEng, FIChemE

Keith is a Chartered Engineer, a Fellow of the Institution of Chemical Engineers and a member of the IChemE Safety & Loss Prevention Subject Group and European DIERS User Group. With a BSc (Hons) in Chemical Engineering from the University of Birmingham, his specialties include runaway chemical reactions, thermal stability and decomposition, emergency relief vent sizing for uncontrolled reactions and 2-Phase Flow, hazard identification, risk assessment and worst case scenario studies, HAZOP team leadership and Safety Integrity Level and Safety Instrumentation (BS EN 61508/61511). Keith joined DEKRA Process Safety in 1994.

Nigel Allen, BSc, AMIChemE

Nigel has a BSc (Hons) in Chemical Process Engineering and Business Studies from Aston University and is an Associate Member of the Institution of Chemical Engineers (IChemE) and their Safety and Loss Prevention Group. His areas of expertise include explosion hazard and risk, HAZOP and Non-electrical equipment ignition risk, occupied buildings risk assessment (OBRA), consequence modeling and Quantified Risk Assessments (QRA). In addition Nigel has experience in Seveso report writing, employee HSE competence profiling, process and occupational safety audits, process safety management (PSM) systems and culture reviews, accident and incident investigations and permit-to-work systems.

Wahid Azizi, M.Eng.(Hons.)

Wahid Azizi is a Process Safety Specialist consulting at DEKRA Process Safety. Previously, he was a Technical Safety Leader at Procter & Gamble. He worked in the London Plant; a Top Tier SEVESO site and one of P&G's largest plants globally. He has knowledge and experience in various areas of process safety; risk assessments techniques (HAZOP, LOPA), ATEX/DSEAR assessments, SEVESO/COMAH, Electrostatics, mechanical integrity programme and risk based inspection (RBI).

Ian Pavey MPhil, BSc (hons), MInstP, CPhys, AMIChemE

Ian graduated from Bath University with a BSc in Chemical Engineering. After acquiring practical experience of electrostatic hazards while working as a process development engineer, he gained an MPhil in Applied Electrostatics at the University of Southampton, thereafter specialising in electrostatic applications, problems and hazards. Ian is a Principal Electrostatics Specialist at Chilworth Technology and a member of the Institute of Physics' Electrostatics Group, the Institution of Chemical Engineers' Safety and Loss Prevention Group and the British Standards GEL 101 Committee among others. He has numerous articles published on subjects from new electrostatic applications to powder handling problems and fundamental research in understanding hazardous situations.

John Butcher, Chemistry B.Sc.(Hons.)

John Butcher manages the UK DEKRA Process Safety (Chilworth Technology Ltd) Consulting team and is a primary peer reviewer. He has over 25 years' experience in managing successful technical safety and operational teams in global chemical distribution and manufacturing businesses. He has chaired the SIA technical committee (UK's solvent sector) with contributions to the UK's Health and Safety Executive on the safe handling of flammable liquids. He joined Chilworth in 2013 as a Senior Process Safety Specialist and has worked on a variety of process safety projects in different countries.

Our Services In Process Safety and Data Acquisition

DEKRA Process Safety's services

We offer a range of testing and consultancy services to the processing industries, covering:

- Dust/Gas/Vapour Explosions
- Electrostatic Hazards
- Hazardous Area Classification
- Chemical Reaction Hazards
- Chemical Process Optimisation
- Regulatory Testing (NONS, CHIP, CPL, UN)
- ATEX / DSEAR Audits
- Major Hazards (Seveso III / COMAH)
- HAZOP
- Incident Investigation
- Expert Witness
- Training

For further information and a comprehensive list of the testing services available, please contact one of our offices.

About DEKRA Process Safety

The breadth and depth of our expertise in process safety make us globally recognised specialists and trusted advisors in the field. We help our clients understand and evaluate their risks and work together to develop pragmatic solutions. Our value-adding, practical approach integrates specialist process safety management, engineering and testing. We seek to educate and grow client competence to provide sustainable performance improvement. Partnering with our clients we combine technical expertise with a passion for protecting people and assets and reducing harm. As part of DEKRA, the world's leading expert organisation, we are the global partner for a safer world.

For over thirty years we have provided specialist services for the identification, analysis, prevention and management of fires, explosions and accidental chemical releases in the chemical and process industry.

In 2011, our parent company, DEKRA, with safety as its mission, acquired Chilworth Technology, the proven leader in process safety. DEKRA Process Safety represents the collective expertise of our legacy Chilworth businesses - built on a merging of minds, uniting experts in our fields and leaders in process safety.

Our International Locations

DEKRA Services, S.A.

- Valencia, +34 96 136 68 14
 - Barcelona, +34 934 920 950
 - Zaragoza, +34 976 304 448
 - Madrid, +34 912 975 403
- www.dekra-process-safety.es

Chilworth Technology Ltd

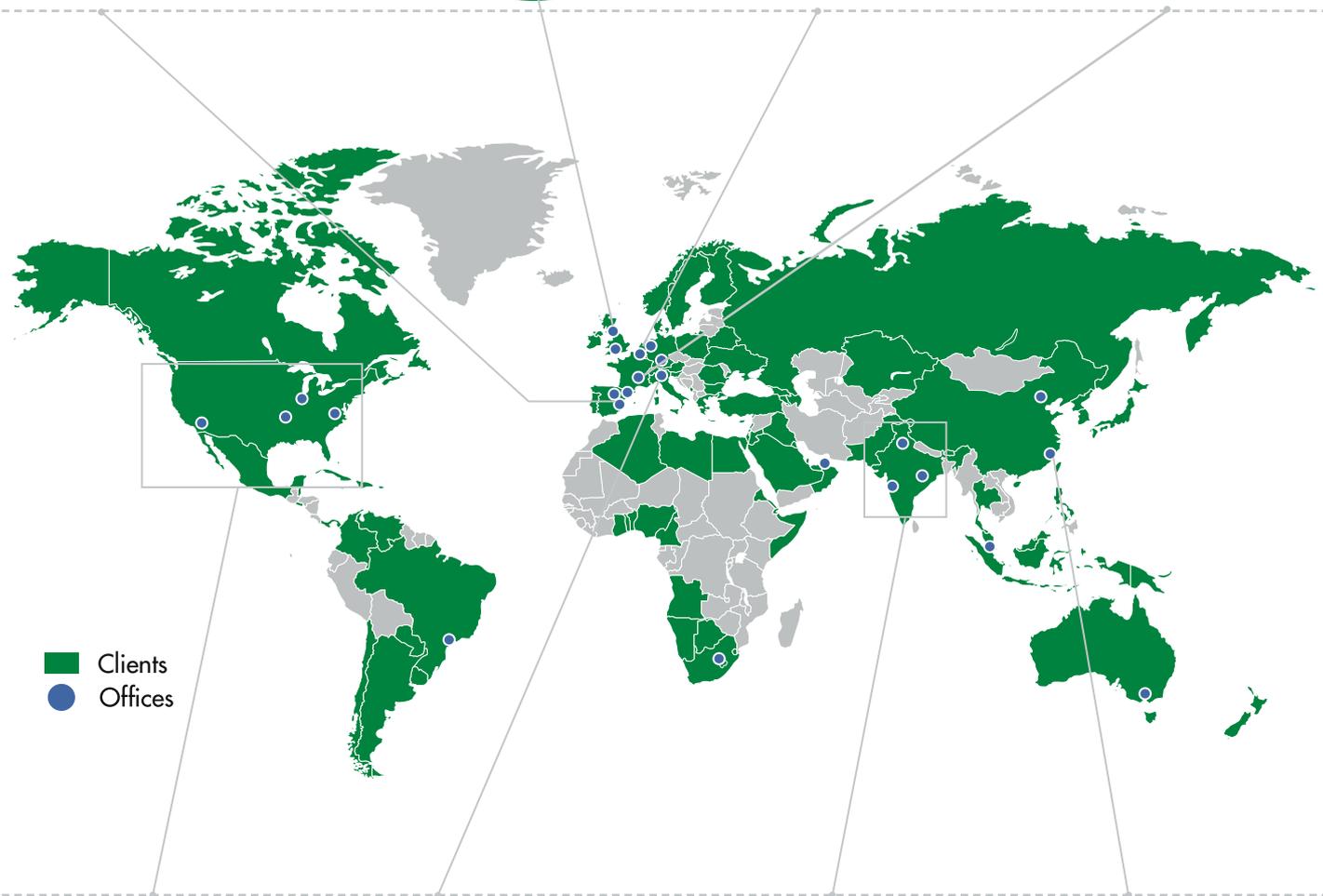
(Southampton, UK)
 +44 (0) 23 8076 0722
www.dekra-process-safety.co.uk

DEKRA Solutions B.V.

Arnhem, The Netherlands
 +31 88 9683847
www.dekra-process-safety.nl

Chilworth France

(Jonage, France)
 +33 (0) 4 72 44 05 52
www.dekra-process-safety.fr



Chilworth Technology Inc (USA)

- Princeton, NJ, +1 609 799 4449
 - Schaumburg, +1 847 925 8100
- www.dekra-process-safety.com

DEKRA Italia Srl

(Cinisello Balsamo, Italy)
 +39 02 89929600
www.dekra-process-safety.it

Chilworth Technology Pvt. Ltd (India)

- Mumbai +91 (0) 22 6694 2350
 - New Deli +91 (0) 11 2613 6979
 - Hyderabad +91 90001 81721
- www.dekra-process-safety.in

Chilworth China

10F, Building 16, No. 250
 Jiangchangsan Road
 Shanghai, 200436, P.R. China
 +86 21 6056 76 66
www.dekra-process-safety.cn

DEKRA Process Safety
Phi House, Southampton Science Park
Southampton - Hampshire - SO16 7NS - UK.
Phone: +44 23 8076 0722
Fax: +44 23 8076 7866
training-uk@dekra.com
www.dekra-process-safety.co.uk