

THE ROLE OF THE LIABILITY RISK CONTROL SURVEYOR IN THE CHEMICAL INDUSTRY.

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1. The responsibility of the liability risk control surveyor is to assess the risk, to give technical advice to his underwriter and to negotiate risk improvements with the insured: his approach to the insured is inspectoral and his method employs check-lists.
2. The purpose of insurance is to cover the legal liabilities of the insured, which may arise under common or statute law, and may have consequences with regard to employees, the public or users of products.
(Key Words: Assessment, Responsibility, Action).

Twenty years ago my employers, Commercial Union Assurance plc recruited their first liability risk control surveyors from within their own organisation. This force has grown since that date and the risk control surveyors now carry out safety assessments of the many companies who are insured by Commercial Union for claims under Employers Liability, Public Liability and Product Liability Policies.

The liability risk control surveyors have a dual role to fulfill:

- 1) They have to be the eyes and ears of the underwriter. They visit the risk insured or proposed for insurance to present to the underwriter a full picture of the client and his operations. The information they provide to the underwriter enables him to more accurately rate the risk as it adds flesh to the skeletal information available on the proposal form and any claims experience sheet.
- 2) They discuss with the client any risk improvements which are appropriate and which will either bring the risk up to a standard acceptable to the insurance underwriter or which will improve the risk further. The recommendations previously discussed and agreed with the client will subsequently be issued in writing by the underwriter to be actioned by the client.

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1. RISK ASSESSMENT.

In carrying out a survey we endeavour to assess:

THE MANAGEMENT FUNCTION - the firm's attitude to safety and awareness of the risks present, the levels of management responsibilities and their effectiveness.

HEALTH AND SAFETY AT WORK POLICY - existence of and extent of policy.

THE SAFETY ORGANISATION - the extent and efficiency of the organisation. The accident prevention techniques used and the accident reporting, investigation and corrective procedures carried out.

TRAINING - the training and retraining programmes within the company - both general job and safety training.

PROCESS AND MATERIALS - the system of operations within the firm; the types of machinery used; whether manually or automatically operated; operating instructions; maintenance programme for machinery; types of guards and extent of inspection programme on guards; programme for upgrading of guards; whether or not there is a permit to work or isolation system operated; types of materials used.

WORKING ENVIRONMENT - the general layout of the factory; the state of the buildings, floors, passages and stairs; the lighting, ventilation and heating; the presence of gases, dust or fume; the noise levels, welfare facilities, methods of material handling, storage facilities and general standard of housekeeping; occupational health/hygiene and first aid facilities.

ENVIRONMENTAL HAZARDS - associated with the processes and materials; toxic substances, radiological hazards, biohazards and noise. The types of waste produced and the effluent discharged from the premises, the method of disposal. The fume or dust emission from the factory and the proximity of other properties. The spreading fire risk and the general nuisance from noise.

PROTECTIVE EQUIPMENT - what types are provided and why? How is it provided and is it suitable? Is the equipment properly maintained? Is it properly used and is the use of protective equipment monitored?

EMERGENCY PROCEDURES - the fire alarm and evacuation procedures practiced. The means of escape, the emergency lighting, the fire fighting organisation and equipment provided. The disaster plan drawn up and tested. The medical facilities and proximity to a hospital.

PRODUCT CONTROLS - Quality assurance policy and quality control standards. Raw material sampling and work in progress and final product inspection sampling and testing. Design staff qualifications and experience. Research and development facilities. Systems of packaging, labelling, handling and storage and date coding.

CONTROL OF CONTRACTORS - the controls and supervision of contractors. Systems for reporting in of contractors. Permit to work systems.

When we visit the risk we are trying to identify if any of the Seven Deadly Sins are committed in the factory/site/premises. One or more of these "Pretty Misses" can be the down fall of the company in which it is nurtured.

- 1) **MISS MANAGEMENT** - Poor management and supervision.
- 2) **MISS INFORM** - lack of adequate training of workforce.
- 3) **MISS PLACE** - poor housekeeping standards.
- 4) **MISS USE** - poor care of machines and tools - inadequate or no maintenance done.
- 5) **MISS HANDLE** - incorrect use of mechanical plant - Fork lift trucks and stacker trucks.
- 6) **MISS TRUST** - Poor industrial relations.
- 7) **MISS ADVENTURE** - This is the cardinal sin. The accident which occurs as a result of one or more of the previous sins.

We welcomed the introduction of the Health and Safety at Work etc. Act which set out legally what we had been endeavouring to accomplish for many years - the proper delegation of responsibilities, the preparation of a written safety policy, the appointment of safety officers, the formation of safety committees and the setting up of proper training facilities.

The Act also highlighted the hazards to third parties not connected with the production risk at the premises. This was a hazard few firms had given adequate consideration to, but which had always come within the scope of our inspection when we held the Public Liability as well as the Employers Liability Insurances.

2. RISK CONTROL & IMPROVEMENT.

Having appraised the firm and carried out an inspection of their premises we would then become involved in the second part of our role - the job of risk control and improvement which is an equally important function.

Recommendations will be made relating to specific points noted during the survey:

- a) provision of guards on machines.
- b) wearing of safety apparel.
- c) improvements in housekeeping standards.
- d) control of employee actions.
- e) alterations to systems of work.

As the environment and condition within the premises may alter from day to day, the specific recommendations made at the time of the survey may turn out to be only the tip of the iceberg. For this reason we lay great stress on our insured having a worth-while safety organisation which can identify its own problems and set about rectifying them. We would therefore also comment on improving or extending the existing organisation if this was needed.

Our job is to act as a catalyst which will stimulate ACTION from our clients.

It must be appreciated that the liability risk control surveyor has a very wide remit. He is called upon to visit any risk that his company insures or has been asked to insure.

This covers the whole range of manufacturing industry, the construction industry, the service industry, the entertainment industry, the education industry, the catering industry and any others missed out. For this reason he cannot be expected to be an expert in all of the many risks he visits. He has to have a general knowledge of the industry built up during his training and subsequently enhanced by his visits and re-visits to the various risks over a period of time.

HE IS NOT THERE TO ASSUME THE RESPONSIBILITIES OR PROVIDE THE EXPERTISE WHICH SHOULD BE SUPPLIED BY THE COMPANY'S OWN MANAGEMENT.

Our risk control surveyors come mainly from within our own organisation where they have gone through a thorough insurance training and have either knowledge of the underwriting of risks or the handling and settling of claims from risks. We consider it very important that the surveyor knows why insurance is important. He must therefore understand how and why legal liabilities arise and what the current legislation relating to Health and Safety at Work is.

During his training period he will cover all these aspects as part of his ongoing education. He will accompany various senior liability surveyors visiting different risks to learn from them the hazards within each industry and the safety techniques employed to prevent accidents happening. As a company we have transacted liability insurance for over 80 years during which time we have amassed substantial facts and information on causes of accidents and accident prevention techniques which we endeavour to put to the best possible use when visiting risks. Our surveyors do therefore have very wide experience and carry out their surveys of a risk with the background knowledge of

- a) What types of accident occur in the industry.
- b) Where the accidents occur.
- c) Why the accidents occur.
- d) How the accidents can be prevented.

It would not be realistic to expect every liability risk control surveyor visiting the chemical industry to have a chemistry degree, those visiting the engineering industry to have an engineering degree, those visiting the electrical industry to have an electrical engineering degree or those visiting a sawmill to be qualified woodworking machinists etc. Such a view would spring from a misconception of the role and responsibilities of the surveyor and the responsibilities of the employer.

Responsibilities of the Employer.

Responsibilities of the employer arise under three distinct headings.

1. Contract (Contractual Relationship)
2. Tort (Delict in Scotland)
3. Statute.

Contract and tort are two elements of what is known as the Common Law. This is the law which has evolved over the centuries from the decisions of the courts. These decisions set the precedents to be followed.

CONTRACT

An employer owes a duty of care to all his employees. This is an implied duty, one which does not have to be written into a contract, but which is fundamental to their relationship. It is the duty of the employer to ensure that the employee is protected against foreseeable risks while doing his/her job.

It is a vital, primary and most important duty and requires the employer to

- 1) provide a safe place of work for the employee with safe access to and egress from that place of work.
- 2) provide colleagues to work with the employee who are responsible and trained to do their work and are not irresponsible or incompetent or practical jokers.
- 3) provide safe systems of working - be it for complete operation or a single job.

The employer must lay down the system of work. It must not be left to the employee, no matter how skilled he/she may be, to devise his/her own safe system. The employer should certainly involve the most skilled and experienced employees when he is devising the system, but the responsibility is ultimately his and should an injury result from the use of the system then the liability devolves on him.

In 1937 the Scottish Case - Wilson and Clyde Coal Co., V English emphasised that the duty of care was personal to the employer and could not be delegated. Although an employer may appoint a safety officer to advise and monitor safety within his factory, should the safety officer fail and an accident arise then the employer is vicariously liable.

The provision of a safe system of work within any premises would of necessity incorporate the provision of tools and equipment which are well guarded, maintained and safe to use.

The employer's responsibility however does not end here. He must ensure that any employees using tools and machinery are properly trained in their use so that they are aware of the potential dangers from the plant and make proper use of the guards which are provided for their protection.

TORT (DELICT)

The responsibility of the employer does not finish with his responsibility for providing a safe place of work for his employees. He also owes a duty of care to members of the public who may be affected by his undertakings. This duty arises in Tort.

The basis of this delictual duty was laid down in the Scottish Case DONOGHUE v STEVENSON (1932) when it was established that we owe a duty of care to all those who are likely to be affected by our actions. These could be persons working within our premises as contractors e.g. B.P.Grangemouth or Swan Hunter; People living beside/beyond our premises such as private householders and adjoining factory occupiers e.g. Flixborough and Bhopal; people using our products e.g. thalidomide and baby foods; even people trespassing on our premises - particularly children.

It is this duty of care which has extended legal liability to situations which many people do not yet understand. If you invite contractors on to your land to do certain work for you, you must apply your mind to arrangements so far as their safety is concerned. If you do nothing - adopting the attitude "I have no responsibility they must look after themselves" then you should not be surprised if a Court sees the matter in a different light (Swan Hunter).

You must also ensure that people invited to your property or trespassing within your property cannot be exposed to dangers. You must not set a trap for the unwary, uninvited and unwanted visitor.

STATUTE

Statutory duties are imposed by Parliament in the form of Acts of Parliament and Statutory Regulations. A breach of these regulations can lead not only to a claim for civil damages following an accident but also to a criminal prosecution of the company or individuals within the company. Over the years the acts and regulations passed by Parliament have been brought in as a result of the poor accident history in the country generally or because of a specific accident problem within a specific industry or with a specific machine.

In 1975 The Health and Safety at Work Act 1974 was introduced. This act included within the cover of safety legislation millions of people who had been excluded because they did not work in a Factory, Office, Shop etc. Its purpose was to endeavour to change the approach to safety within the country by making all people aware of their individual responsibilities for safety. It was an effort to revolutionise safety within the country and peoples' approach to safety.

It assumed that as employers create the risk they should be responsible for controlling it by proper analysis of it and by setting up an appropriate safety organisation based on the result. Their approach should be published in a formal policy statement.

It introduced the possibility of personal prosecution of individuals for a breach by them of their delegated safety responsibilities and the fining or jailing of these individuals. The act was an enabling act designed to gather the confusing range of existing regulations under its umbrella until they were eventually amended, revised or replaced as necessary over a period of years e.g.

- 1) The Factories Act 1961.
- 2) The Offices, Shops and Railway Premises Act (1963)
- 3) The Construction Regulations (1961)
- 4) The Mines and Quarries Act (1954)

The responsibilities, therefore, of each employer, self employed person, manufacturer etc. are extensive and onerous. Should any employer fail in his responsibilities and a person is injured or property of another person is damaged then the employer may be legally liable for the injury or damage which has occurred and be sued by the injured party.

THE ROLE OF INSURANCE.

Insurance companies issue Employers Liability, Public Liability and Product Liability Policies which cover the legal liabilities of the policyholder. They would be called upon to investigate any claim made against their insured and if the insured is legally liable for the injury or damage caused then they would pay the appropriate compensation to the claimant. This compensation could be many millions of pounds.

As a company issuing these policies we have a vested interest in the efforts being made by our policyholders to prevent accidents occurring. We will therefore visit their premises and plant to inspect at first hand their operations to see if we can advise them - NOT HOW THEY SHOULD DO THEIR JOB but rather HOW THEY COULD DO THEIR JOB IN A SAFER MANNER.

THE CHEMICAL INDUSTRY.

Although the chemical industry employs some of the most sophisticated accident and loss control techniques and many firms have an enviable safety record, the hazard potential is high. This causes insurers to rate it at levels which may be higher than some industries with less qualified staff and a more primitive approach to Risk Control.

The risk control surveyor visiting a chemical risk has to start from the assumption that all the chemicals used or produced within the premises are dangerous until proven otherwise. You are the specialists and we rely on you to explain your operations and convince us that you know about the chemicals you handle, and that either

a) they are not

- (1) toxic (2) caustic or corrosive (3) flammable or highly flammable
- (4) explosive (5) long term health risks.

or that

b) although they are

either (1) toxic (2) caustic or corrosive (3) flammable or highly flammable (4) explosive (5) long term health risks, you are fully aware of the potential hazards and have incorporated the necessary safeguards into your production processes.

In reviewing the chemical risk we will therefore consider and evaluate the following.

- 1) Safety manager/safety engineer/safety officer. Does the company have one? What are his qualifications? what is his position within the company's hierarchy? What is his authority within the factory or plant?
- 2) Has a full inventory of the chemicals used or produced at the site been drawn up and is it kept up-dated?

Figure 3. Schematic of Nitrogen and Vent Headers

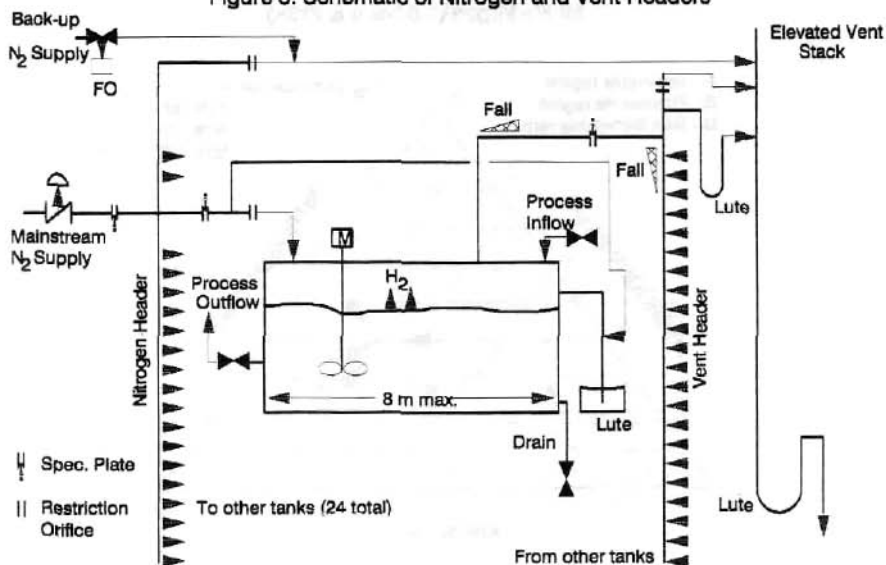
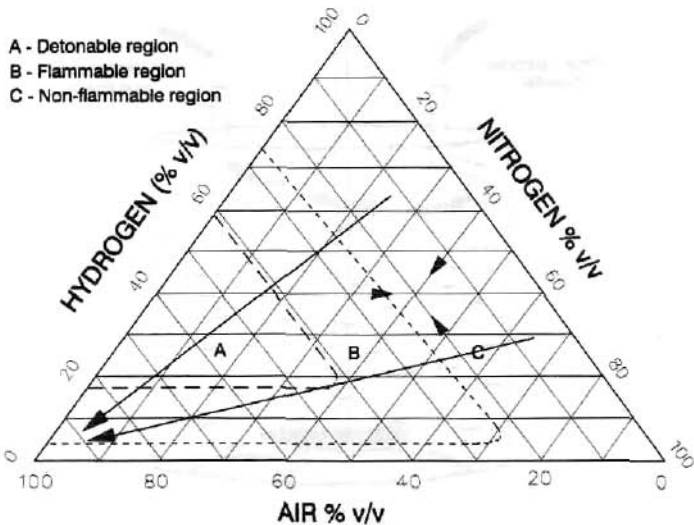


Figure 4. Flammability Diagram showing Air Ingress Scenarios from Outside the Flammable Envelope



As in all industries, accidents will occur from time to time from general causes e.g. slips and falls, strains and bruises, cuts and fractures. These accidents together with the splashes, burns and known toxic effects arising out of the use of chemicals, do not present a serious problem to the liability underwriter. He expects these from time to time and can accommodate them in his rating of the risk. Factors which are more difficult for the underwriter to assess in each of the three classes of insurance are as follows.

(1) Employers Liability

The possible long term potential disease risk from the chemicals used at the premises because of the long latent period before a disease may manifest itself.

As knowledge continues to advance then we can expect to find that further diseases or potential diseases from chemicals in common use will be identified. Each year in the Health and Safety Guidance Note EH40, revisions, almost always downwards, are made to the exposure limits for various substances contained within the guidance note. These revisions will undoubtedly be used in later years as the basis of a claim by the solicitors of affected parties as it is constantly highlighted that the levels indicated in EH40 are not Safe Levels. They are recommended maximum long term exposure limits expressed as time weighted average concentrations.

It is therefore incumbent upon all employers to constantly strive to improve the working conditions within their premises so that employees are not exposed to any substances which may be harmful to their health. The employer must set his own maximum exposure limits and occupational exposure standards where none exist at present.

(2) Public Liability

The examples of Flixborough and Bhopal demonstrate only too clearly the potential for disaster which can be unleashed on the general public as a result of the unsatisfactory management of chemical risks. Each chemical plant presents its own individual risk to the underwriter. The risk will revolve round the process carried out, the quality of management control, the safeguards incorporated into the system, the hazards from the materials stored on the site and the situation of the site in relation to other properties.

The underwriter is also concerned with the possible pollution risk caused by accidental discharges from a premises. The recent "Sandoz" Case with the pollution of the Rhine in Switzerland, the Love Canal pollution in America and the pollution of the River Wear in England are all examples fresh in the mind of the liability underwriter of the heavy risk attaching to chemical discharges.

(3) Product Liability

The Thalidomide tragedy of the early 1960's brought very clearly to attention of the world the damage which could be caused to the unborn child by drugs. Since then further problems have come to light from the side affects of drugs including Debendox, Opren, Codeine and Aspirin. The proper testing of drugs which are prescribed for human use is essential. Unfortunately, even the exhaustive tests which are done have not necessarily highlighted all the side effects. The ingredients risk is one therefore which can have significant potential. This risk is not restricted to drugs. It also manifests itself in the use of chemical additives in animal feed and in other areas where the chemical formula of the product is critical e.g. paints, adhesives, fertilisers and pesticides. The effect of the Consumer Protection Act 1987 (Part 1 Product Liability), effective from 1st March 1988, is that in broad terms it imposes strict liability on producers for their defective product.

A person who suffers personal injury or damage to his/her personal property will no longer have to prove negligence by a manufacturer. This extended further the liability which attaches to producers and as a result increases the potential risks for product liability insurers. The quality assurance control standards within each manufacturing premises have therefore become more crucial in the eyes of the underwriter because the claimant will no longer have to prove the negligence of the manufacturer to succeed in his claim.

As a company we have recognised that as well as broad knowledge and experience greater specialist knowledge is required in certain areas to increase our effectiveness. Individual surveyors have therefore attended external training courses to become the company's specialists in particular subjects. The range of subjects covered include,

- 1) Noise
- 2) Pollution
- 3) Electricity
- 4) Use of Explosives
- 5) Ventilation and Extraction
- 6) Radiation
- 7) Building & Civil Engineering. a) Sub Structure b) Superstructure.
- 8) Product Liability.

In view of the highly technical nature of the chemical industry we have recruited from industry two qualified personnel who are now the company's specialists in a) Toxicology and b) General Chemical Risk, other than Toxicology. These recruits have also undertaken internal training within our organisation to equip them to carry out their full role as liability risk control surveyors in all industries.

Where we are insuring a specialist chemical company or group then the specialist surveyor could be involved in carrying out a joint survey with the local surveyor of the risk. This dual inspection should elicit fuller information of the risk for the underwriter and should help extend the knowledge of the local surveyor who will be responsible for the routine resurveys of the risk in subsequent years.

The visit by the liability risk control surveyor should be used by you as an opportunity to make your own fresh critical appraisal of your plant and operational procedures. In reviewing with him your methods of operation you should be evaluating them to determine whether or not modifications and improvements can be made in the light of advances in scientific and engineering knowledge. The risk control surveyor will not learn all about your operations during a one or two day visit to your premises. It will take many revisits by him before he is fully acquainted with your operations and before he gets to know you and you him.

The introduction in 1989 of the "Control of Substances Hazardous to Health Regulations" will require you to carry out the regular appraisals of your operations if you are not already making them. What better time to carry them out than with the representative of the insurance company. You will call upon to indemnify you should MISS ADVENTURE come to call.