INSPECTION OF HEALTH AND SAFETY MANAGEMENT SYSTEMS

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Organisations are required by law to have effective management systems to control the risks arising from their activities. Arising from research which led to the publication of 'Successful Health and Safety Management' the Health and Safety Executive, HSE, has developed a framework upon which to base its assessment of employer's health and safety management systems. Inspectors within the Chemicals and Hazardous Installations Division, in common with other parts of HSE, are using audit techniques, built around this framework, as part of their inspection programme.

Key words: health and safety management, inspection, management arrangements, workplace precautions, risk control systems.

INTRODUCTION

The public inquiries into accidents such as Piper Alpha, the fire at King's Cross underground station and the Herald of Free Enterprise ferry disaster all revealed serious failings in the management of risk. These incidents focused our minds on the crucial importance of effective health and safety management within organisations. As regulators this led the HSE to consider what was meant by an effective health and safety management system, and of the legal basis for such a system. As inspection is an integral part of how we secure the protection of employees and the public we also needed to devise ways of inspecting management. This entailed drawing up criteria against which to make judgements on suitability.

LEGAL REQUIREMENTS

The main legal requirement to have an effective management system is contained in the Management of Health and Safety at Work Regulations 1992, although the general provisions of the Health and Safety at Work Act could be viewed as implying the need for an effective management system as a way of ensuring the health and safety of employees and others.

FRAMEWORK HEALTH AND SAFETY MANAGEMENT SYSTEM

The basic criteria for an effective management system is contained in the HSE guidance booklet 'Successful Health and Safety Management' (HS(G)65). Since its publication we have developed the ideas it contains to formulate a framework management system, consisting of 3 levels, which can be used to assess health and safety management systems as part of our inspection programme. This framework is shown in **figure 1** and described below.

Viewed as a simple process any business activity may be seen as the utilisation of resources to perform a task which generates a product or a service. Resources may include materials, human resources and information. In addition to a product or a service further outputs may be the generation information and by-products. A business activity may also have an impact on the environment and the public. At each stage of this business process there may be health and safety considerations - in raw material specification, in the knowledge and skills of people recruited, at the interface with hazards during production, of the safety of the finished product and the information generated to ensure its safe use and of the risks created from by-products. The health and safety of the public and of factory neighbours may also be an important factor.

Workplace Precautions

Employers have to provide controls to protect people against hazards generated by these business activities. Within the workplace physical controls and systems of work are provided against hazards - machinery guarding, local exhaust ventilation, containment of hazardous substances, written procedures etc. There may also be a requirement to produce product information, dispose of hazardous by-products and put in place arrangements to deal with an off-site emergency.

We have called these front-line protective measures **Workplace Precautions**. These are the outputs of the management system which can be readily seen and inspected.

Risk Control Systems

These **workplace precautions** do not just arise themselves. Someone has to decide which precautions are needed, when and where they have to be applied, how the work is conducted, the measures to ensure people follow the procedures and that systems are maintained. We call the management activity aimed at ensuring control of particular risks **Risk Control Systems**. The extent and scope of these control systems depends upon the hazards encountered or created by the business activity - the **hazard profile**. Greater emphasis needs to be given to managing those business activities which give rise to the greatest risk. An effective risk assessment programme will inform the prioritisation of management resources and effort.

Management Arrangements

The right mix of risk control systems may seem sufficient to ensure health and safety within a organisation. However, there has to be some strategic management processes which are not directed to controlling particular risks. These are the **management arrangements** described in Successful Health and Safety Management. They essentially form a management control loop based upon the quality systems concept of plan, act, check, review, improve.

Policy Policy is the approach taken to health and safety throughout the organisation. It sets the background expectation against which people make decisions and take action in relation to health and safety and may be compared to the priority given to other organisational aims eg productivity, profitability, quality and corporate self-image.

Organising Organising is the process of designing and establishing the management structure and responsibilities which deliver the effective management of health and safety. It can be considered as 4 aspects: **control, co-operation, communication and competence**.

- **Control** is concerned with the clear allocation of health and safety responsibilities and the arrangements for holding people accountable for those responsibilities.

- **Co-operation** is about securing the trust, participation and involvement of all employees;

- Organising **communication** involves making arrangements for the flow of information into, within and from the company. An important aspect is the visible demonstration of commitment by managers;

- Organising **competence** is about ensuring that people have the appropriate knowledge, skills, and experience to control risks at work.

Planning and Implementing **Planning** is the process by which objectives and methods for implementing the health and safety policy are decided eg allocation of resources and deciding on priorities. Planning maps the direction an organisation wishes to take and incorporates, as a starting point, effective risk assessment.

Implementing involves working within designed plans and procedures.

Measuring Performance Measuring means the collection of information about the implementation and effectiveness of plans and standards. This involves a variety of active and reactive checking or monitoring activities. Active monitoring is checking to ensure systems of work are being followed and are appropriate. Reactive monitoring involves investigation of accidents and incidents to discover weaknesses or omissions in performance standards.

Reviewing Performance Reviewing is the process concerned with making judgements about the adequacy of performance and taking decisions about the nature and timing of the actions necessary to remedy deficiencies.

Auditing Auditing is an independent assessment of the whole or part of the health and safety management system to ensure that the management processes are adequate and are maintained in operation.

SMALL BUSINESSES

For many small business having a fully developed safety management system with all the features so far described may be unnecessary because of the close relationship between those in control and employees. However, there are attributes of this approach which can be adopted. The concept of a hazard profile, ie recognising what key hazards are present is an essential starting point for risk assessment. For each hazard where controls are deemed necessary to reduce the risk the elements of a risk control system form a helpful checklist to ensure that the risk will be effectively managed, ie what level of control is needed, who is responsible for ensuring the

correct precautions are followed, routine checks to see that precautions are followed and action taken to secure improvement when problems are discovered.

GUIDANCE AND TRAINING

The recent 'British Standard Guide to Occupational Health and Safety Management Systems', BS 8800 incorporates the concepts of health and safety management outlined in HS(G)65 and provides further practical advice on establishing and effective safety management system. The basic framework management system described above has also been used by the Institute of Chemical Engineers in developing their forthcoming training packages on Safety Management Systems, Auditing and Performance Indicators.

INSPECTION OF HEALTH AND SAFETY MANAGEMENT SYSTEMS

Having developed a framework template against which we can compare an employer's health and safety management system we next devised a method of inspection. Essentially inspection is about gathering information relating to a particular activity or issue and forming a judgement on its suitability compared to a legal requirement and current industrial best practice. Following this appropriate action is taken to remedy any short fallings.

An audit system has been developed to inspect health and safety management systems of larger, more complex and hazardous organisations. The aim is to come to a conclusion about the management of health and safety within the whole organisation. However, one of the practical problems we are currently facing is in deciding on the appropriate level of intervention within an organisation so that findings may be applied to all subordinate business activities.

The process of inspection used to assess health and safety management differs from the more conventional approach to inspection because greater emphasis is given to activities and processes which can not be directly observed. A greater proportion of information on which to form judgements comes from reviewing organisational documents and from structured interviews with key personnel.. The difference in balance between information sources utilised in conventional inspection and inspection of management systems is illustrated in **figure 2.**
Our audits involve an assessment of the all the elements we have called **management arrangements** together with a sample of key **risk control systems** and associated **workplace precautions**. We use the HS(G)65 to judge the adequacy of management arrangements and have developed complimentary criteria against which to judge risk control systems. These consist of the essential characteristics of an individual control system eg permit to work, as shown in **figure 3**. These mirror the main elements of HS(G)65. In this way a picture of the strengths and weaknesses of the management system is built up using a diversity of evidence.

Audits involve more preparation before the site visit compared with traditional hardware based inspections in order to decide on the issues which need to be examined. An important stage in this preparation is deciding the appropriate hazard profile of the organisation. This profile then determines which risk control systems are sampled during the audit. The key stages of an audit are outlined in **figure 4**.

The end point of an audit is typically a report which highlights both the strengths and weaknesses of an employer's management system with an expectation that the employer will produce their own improvement plan to deal with serious weaknesses or deficiencies. Improvement plans are then followed up over an agreed period of time to ensure that suitable progress is being made.

CO-ORDINATION OF INSPECTION

In order to co-ordinate inspection of employers with more than one work location a Lead Inspector programme is currently being trialed within the on-shore major hazard sector. This involves one (Principal) inspector planning and co-ordinating inspection nationally for a selection of employers. The results of the trial are currently being reviewed to decide on the costs and benefits of this approach and to formulate criteria which may be used to decide on the type of employer for which it would be beneficial to formulate a national inspection strategy.

References

Successful Health and Safety Management. HS(G)65. 1991, HSE Books, ISBN 0 717 0425 X.

The Costs of Accidents at Work. HS(G)96. 1993, HSE Books, ISBN 0 7176 0439 X.

Figure 1 HEALTH AND SAFETY MANAGEMENT SYSTEM

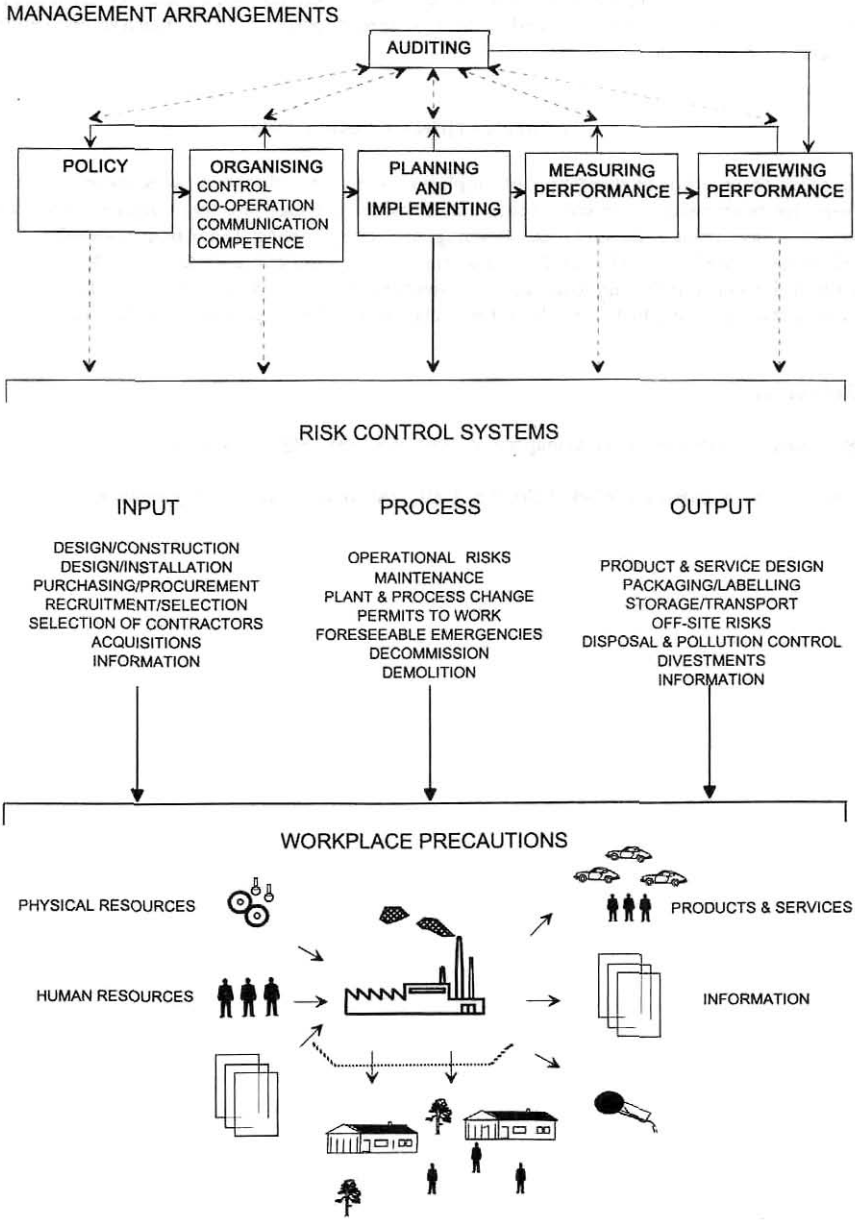
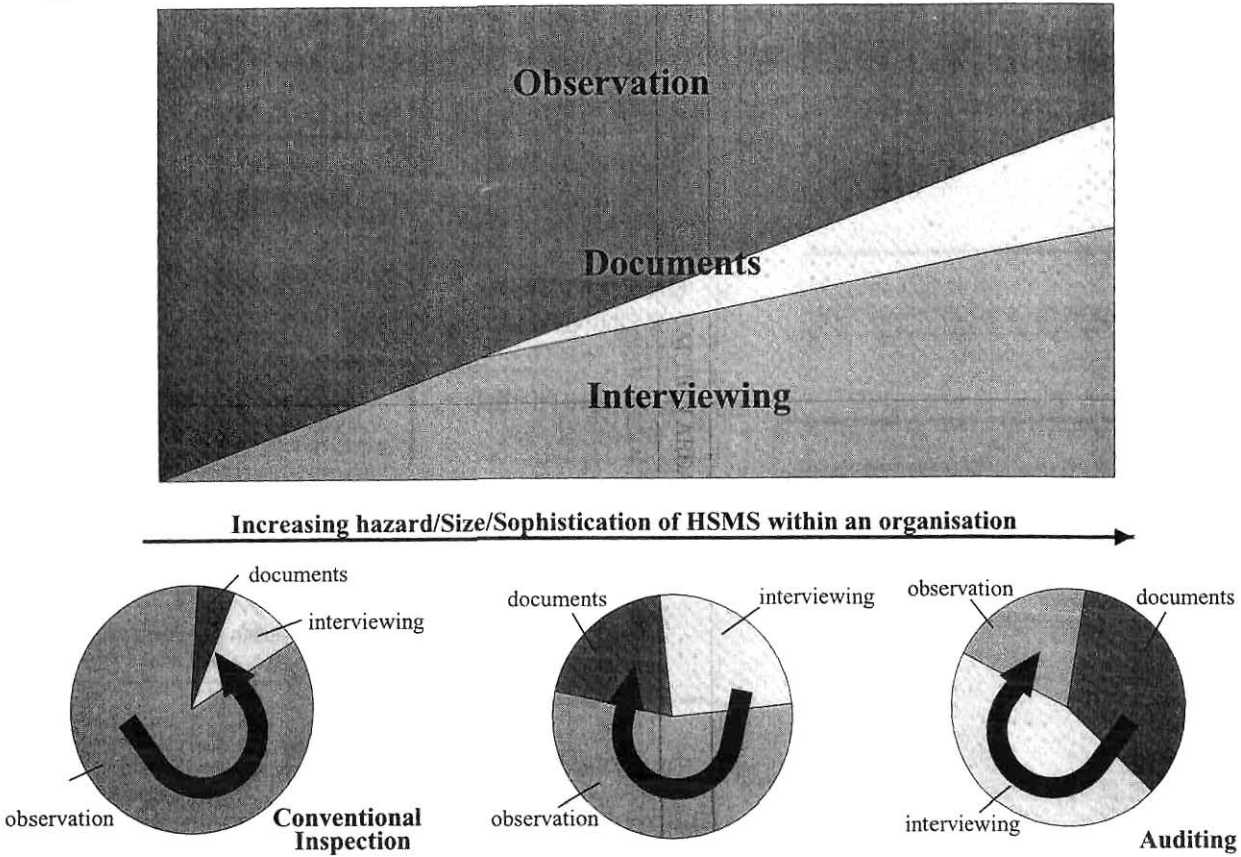


Figure 2 Balance of Information Sources Utilised During Inspection



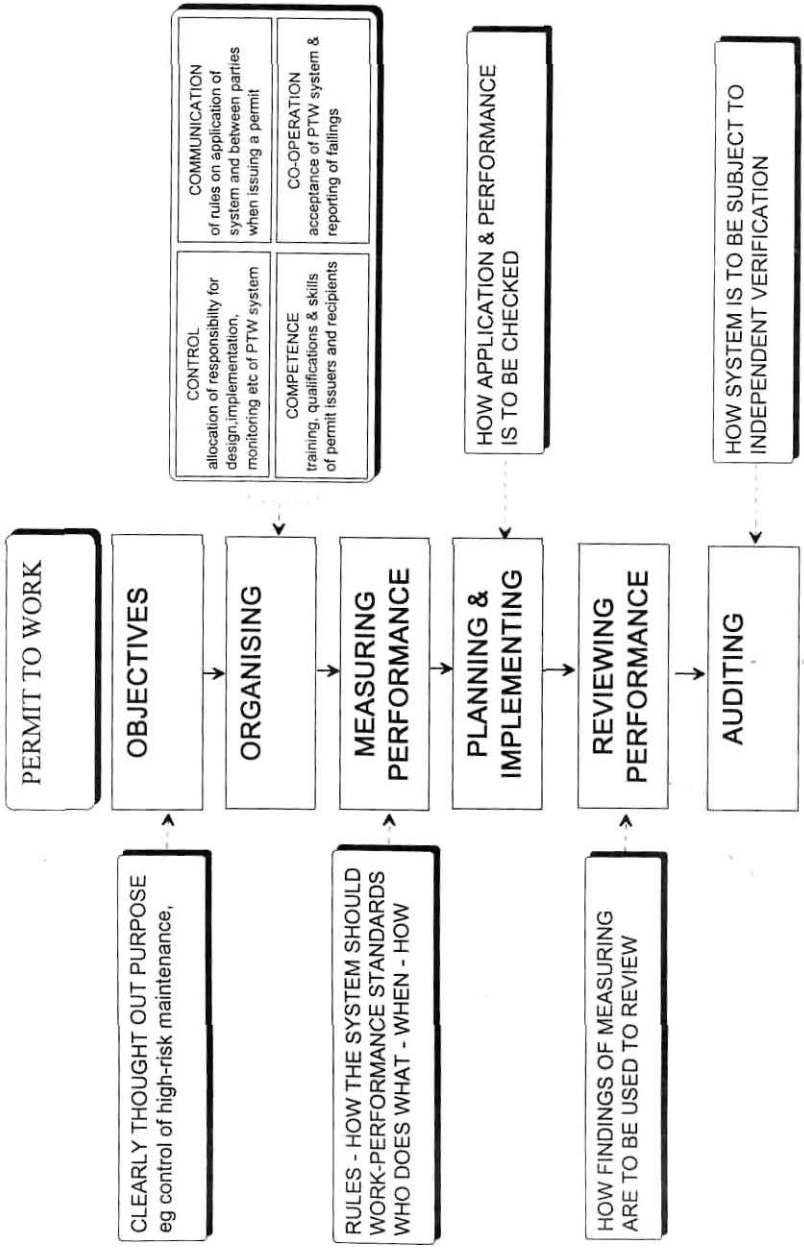
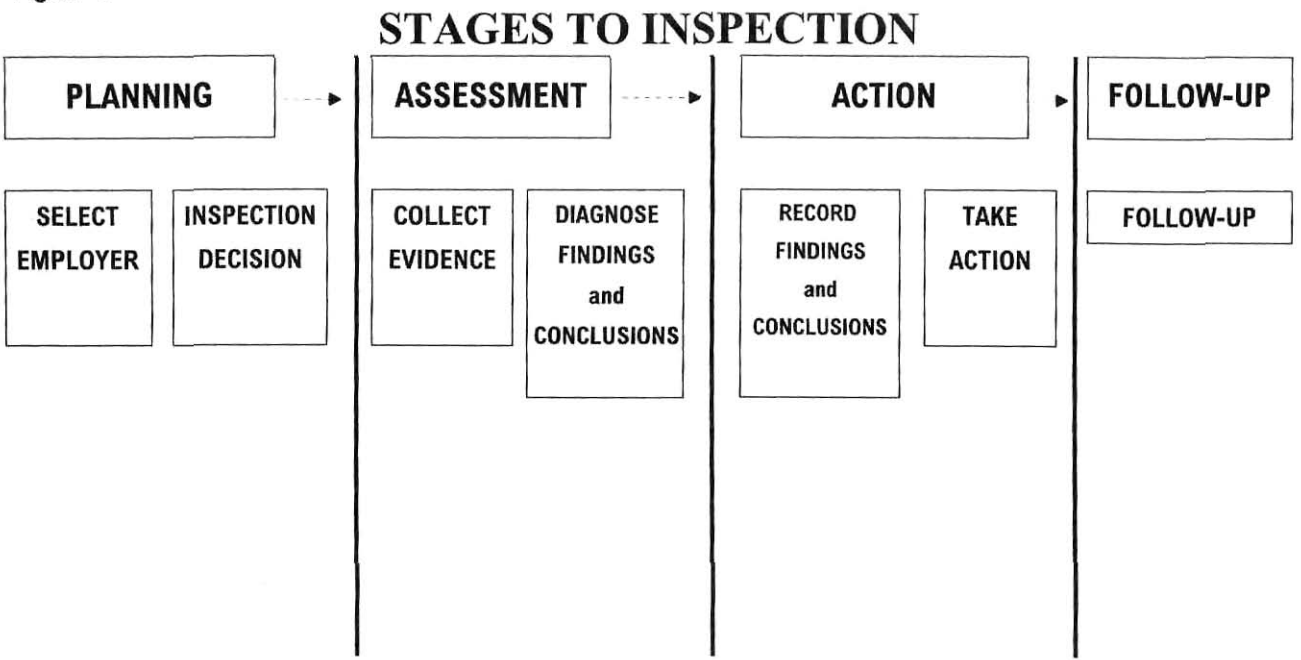


Figure 3 EXAMPLE OF ASSESSMENT OF A RISK CONTROL SYSTEM - PERMIT TO WORK

Figure 4


STAGES TO INSPECTION
PLANNING
ASSESSMENT
ACTION
FOLLOW-UP
SELECT EMPLOYER
INSPECTION DECISION
COLLECT EVIDENCE
DIAGNOSE FINDINGS and CONCLUSIONS
RECORD FINDINGS and CONCLUSIONS
TAKE ACTION
FOLLOW-UP