

MAINSTREAM RESEARCH NEWS



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□ HSE PUBLISHES A NEW INTELLECTUAL PROPERTY (IP) POLICY STATEMENT FOR ITS RESEARCH

HSE initially published an Intellectual Property Policy Statement and Exploitation Plan on its use of IP in 1997. A fundamental principle of that policy was that HSE would normally retain ownership of IP it funded, unless particular circumstances applied.

Since then, HM Treasury and DTI Ministers have commissioned a study under the leadership of Mr John Baker of Medeva plc (now part of Celltech) to: investigate the commercialisation of research in Public Sector Research Establishments (PSREs); and to make recommendations for increasing the rate at which research was successfully commercialised consistent with other Government objectives for PSREs.

The Government accepted the recommendations of the report from that study, which included the principle that ownership of IP and the associated responsibility for commercial exploitation should in future, except where specific exemptions apply, be vested in the organisations that do the research and generate the IP rather than remain with the public sector purchaser.

Consequently, HSE's IP policy has been changed to fully align with the accepted recommendations of the Baker Report. Ownership of the IP generated from S&I activity funded by HSE will reside with the provider, as the body best placed to secure exploitation, unless one of the following situations is considered to apply, in which case the IP will remain with HSE:

standards or regulatory work – HSE needs to ensure that IP generated from such work does not allow one particular supplier to establish a

monopoly in supplying goods or services required to meet the standard or regulation;
improvements to health and safety - consistent with HSE's overall mission, the health and safety benefits arising from HSE-funded S&I activity must be promoted and exploited in preference solely to the commercial exploitation of that work;
dissemination of information - where the full disclosure of information generated from HSE-funded S&I activity is essential, in order to provide transparency to subsequent decisions or policy produced or implemented;
aggregation of work – where HSE S&I activity is part of an aggregation of work undertaken by a number of providers and the IP is best exploited at the aggregate level; and/or where HSE needs to ensure its freedom to use alternative sources of supply for related S&I activity and to make IP from earlier work freely available;
provider resources - where the provider does not have the resources to protect and exploit IP that is generated, or may decline to take ownership.

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Copies of the IP Policy Statement and Exploitation Plan are available from: Simon Armitage, PO Box 1064, Sheffield, S3 7YB or on HSE's website at the following URL:
www.hse.gov.uk/research/iprights.pdf

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□ WHAT'S NEW?

□ EFFECTIVE MANAGEMENT OF UPPER LIMB DISORDERS (ULDs)

(Contractor: System Concepts Ltd)

Musculoskeletal disorders (MSDs) are the largest single cause of occupational ill health in Great Britain, affecting an estimated 1.2 million people a year. Targets set under the Securing Health Together initiative include achieving a 20% reduction in the incidence of work-related ill health and a 30% reduction in the number of working days lost due to work-related ill health by 2010. The HSC Strategic Plan 2001/4 identified a priority programme of work on MSDs and the research agenda for this priority programme has set out the need to improve skills and competence in the management of work-related ULDs.

The aim of this project is to identify how health professionals can become more effective in the diagnosis, treatment and overall clinical management of cases of work-related ULDs.

The work will consider existing gaps in training and training requirements of health professionals and will identify optimum approaches to the clinical management of ULDs by examining any discrepancies between current and best practice.

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□ DEFINING A CASE OF WORK-RELATED STRESS

(Contractor: University of Nottingham)

It is widely recognised that work-related factors play a significant role in contributing to employee experience and reporting of stress and HSC has agreed to a plan of work to tackle such work-related psychosocial problems. HSE has defined stress as 'the adverse reaction people have to excessive pressures or other types of demand placed on them'. The cumulative impact of these reactions can result in a range of illnesses and syndromes, which can variously be attributed to work-related stress. Of fundamental importance is the requirement to be able to specify as precisely as possible what is meant by a case. The relevant literature over the last decades contains many attempts to try to define such an entity, with variable success. The ability to define a case is important for a number of reasons: for clinical practice and management; for the evaluation of interventions; for epidemiological research more generally; and also to allow HSE to monitor achievement of its targets.

The work to be undertaken on this project will critically review the available scientific literature on the concept of a case or caseness within a framework of developing a model for defining such cases and operationalising the concept of stress.

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□ MEASUREMENT AND ANALYSIS OF MAGNETIC FIELDS FROM WELDING PROCESSES

(Contractor: The Welding Institute)

Welding is used widely in heavy and light industry and around 2.3 million people are employed in metal goods manufacture, engineering and vehicle production in the UK.

From previous literature surveys, knowledge of the electric currents used in welding processes and information collected by both the UK's Engineering Employers Federation and the Royal Institute of Technology in Stockholm, it is evident that welders are exposed to significant magnetic fields.

Welding processes are predominantly manual, with the welder holding a torch or electrode holder, through which the welding current passes. It is common practice for welders to drape the welding cable over their shoulder or wrap it around their body to take the weight off the equipment being held. With present practice, the welder will receive a very large proportion of the available electromagnetic energies generated by the welding process. In addition, welders often have to sit, kneel or lie on the item being welded and this may expose other parts of the body to magnetic fields.

The aim of this project is to provide a satisfactory understanding of the magnetic fields present in the immediate spatial environment around a number of typical welding processes. A comprehensive review of the published literature and other sources of information on magnetic fields associated with arc and resistance welding processes will be undertaken together with measurement and analysis of the levels of welders' exposures to magnetic fields.

Where possible, advice on design and operation features, which may lead to reduced exposure, will be identified for use in future HSE guidance.

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□ WHAT'S NEW?

□ MEASURING THE EFFECTIVENESS OF COMPETENCY-BASED EDUCATION AND TRAINING PROGRAMMES IN CHANGING THE MANUAL HANDLING BEHAVIOUR OF HEALTHCARE STAFF

(Contractor: Loughborough University)

Manual handling of patients is the main cause of injuries and sickness absence in nurses and paramedics and a significant cause for care workers and similar staff in the health, social and emergency services sector. Health services and Musculoskeletal disorders are both HSC/E priorities and are key to achieving the Revitalising Health and Safety and Securing Health Together targets.

Whilst control measures to reduce manual handling risks are well established, there are wide differences in the impact of manual handling training in working practice and on injury rates. The basic elements of training programmes for manual handling in the health care sector are broadly similar in content, but the impact they have on ensuring good practice is very variable. Guidelines from the Royal College of Nursing set out the competencies that training should aim to achieve.

This project will investigate organisational and cultural factors associated with education and training programmes, and other variables in the workplace that equip workers with appropriate competencies to modify behaviour and promote the practice of good patient manual handling.

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□ PERCEPTIONS OF THE COST IMPLICATIONS OF HEALTH AND SAFETY FAILURES

(Contractor: Loughborough University)

HSE has undertaken an extensive range of activities to make employers aware of the costs of accidents (e.g. Good Health is Good Business, the Ready Reckoner, etc.).

This project will assess awareness of such campaigns and whether perceptions of the cost implications of health and safety failures are accurate. The research will consider large, medium and small organisations, across different industrial sectors, and will investigate how organisation size and complexity relate to awareness of health and safety costs. The study will use focus groups and interviews to determine the sources of information on which these perceptions are based and ascertain the types of information that companies respond to and find most helpful. A cost analysis will be conducted for each company and will be compared to the company's own assessment, where available. Otherwise, a comparison will be made between the calculation and the company's perception of their losses. The research will provide an initial assessment of usage of the Ready Reckoner, launched in 2002 to help firms calculate the cost of health and safety failures. The research will examine the influence of this facility on companies' actions and will help to inform future campaigns by HSE and others.

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□ THE DEVELOPMENT OF A HEALTH AND SAFETY MANAGEMENT INDEX FOR USE BY STAKEHOLDERS

(Contractor: Greenstreet Berman)

In 2001, HSE began to explore the benefits of engagement with the Corporate Social Responsibility (CSR) movement and with major institutional investors to raise the profile of health and safety. HSE also commissioned research to explore the degree of support for health and safety indicators to enable investors and others to assess a company's health and safety performance when making investment decisions. The report from this work was presented to HSC in April 2002. What emerged from the report and subsequent discussions was an identifiable need for HSC/E to produce a robust index for the management of occupational health and safety.

In support of the 'challenge' to include health and safety information in annual reports, issued by Government and HSC to the top 350 companies, HSC published guidance on health and safety reporting, including indicators on performance against which top companies should report. The responses received from the top 350 companies and others have indicated that HSE are some way off having a management index that commands the support of all parties.

This project aims to produce a management index, comprising five to six headline indicators (both quantitative and qualitative), that is universally acceptable to investors, business, workers and other stakeholders for the assessment and reporting of health and safety management performance

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□ WHAT'S NEW?

□ A REVIEW OF THE OCCUPATIONAL HEALTH AND SAFETY OF BRITAIN'S ETHNIC MINORITIES

(Contractor: University of Warwick)

The HSC/E Strategic Plan 2001-04 set out the requirement for HSE to 'pay particular attention to the needs of ethnic minorities in developing programmes'. Also, the Race Relations (Amendment) Act 2000 requires public bodies to have due regard to race equality in carrying out their functions. The duty is a positive one, requiring more proactive action with consideration of what actions would be proportionate within the context of functions. This requires an assessment of data to determine the effects or influences of function on different ethnic groups. HSE data sources have not routinely collected data on ethnicity. This is largely because of the problems of statistical power caused by the relatively small proportion of the population in ethnic minority groups and because the measurement of ethnicity itself is complex.

HSE requires an assessment of whether certain ethnic groups are disproportionately affected by work-related health and safety effects or issues. This project will critically review available epidemiology and related evidence to provide an assessment of whether certain ethnic minority groups in Britain are disproportionately affected by work-related health and safety outcomes, issues or activities.

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□ REPLACEMENT OF RADIOGRAPHY BY ULTRASONIC INSPECTION

(Contractor: Mitsui Babcock Engineering Ltd)

HSE is responsible for enforcing the safety of pressure systems throughout the UK. Non Destructive Testing (NDT) plays an essential part in the lifetime integrity of a pressure system with volumetric methods, such as radiography and ultrasonic testing, playing a significant role both during new build and in-service inspection. There are a number of parameters which influence which of the two methods is chosen, such as: code requirements; defect type; geometry; surface conditions; material; accessibility; safety; tradition and economics.

The main advantage of radiography has always been that it produces a permanent record of the inspection in the form of a radiograph. However, its main disadvantage is safety and the possible exposure of personnel to harmful radiation. It also has poor detection rates for certain types of defect. Advances in mechanised ultrasonic testing have enabled a permanent record of inspection with this technique to be made. Also, there are no known safety implications in the use of this technique. This project will review the most common pressure system codes used in the UK and will summarise their requirements for volumetric NDT inspection. A comparative examination of radiography and ultrasonic testing will be made in order to assess the extent to which it is technically and economically viable to replace radiography with ultrasonic testing. A set of guidelines will be produced.

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□ DECISION SUPPORT SYSTEM FOR STRUCTURAL REFURBISHMENT

(Contractor: Loughborough University)

Structural refurbishment work can be complex and uncertain. The most recent HSE statistics have shown that, whilst the number of fatalities in the construction sector in general was lower in 2001/02 than in the previous year, the number of fatalities in the structural refurbishment sector remained unaffected, therefore accounting for a greater proportion of deaths occurring in the industry.

As part of HSE's priority programme of work on the construction sector, it was recognised that specific advice on refurbishment work should be produced to complement the British Standard on Demolition (BS6187;2000) and ongoing HSE work to draft a Health and Safety Guide (HSG) on demolition. HSE has previously commissioned research to look at the refurbishment of structures involving demolition work. That research is now nearing completion and has focused on identifying the key factors responsible for the high rate of accidents and safety incidents seen on refurbishment projects. It is intended that this new research will build on the previous work and will review current strategies adopted for avoiding structural collapse in refurbishment works with a view to adopting best practice. End-user requirements for the development of a decision support system will be established and a functional specification will be developed together with a new process model for refurbishment works, which will help safety considerations to be taken into account from the earliest stages in the planning and design of such work. A prototype decision support system will then be developed and evaluated with industry practitioners.

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□ EXAMPLES OF RECENTLY COMPLETED PROJECTS

□ PRINCIPLES OF GOOD MANUAL HANDLING: ACHIEVING CONSENSUS

(Contractor: Institute of Occupational Medicine Ltd)

The Manual Handling Operations Regulations 1992 place requirements on employers to avoid hazardous manual handling activities where reasonably practicable to do so. Where not practicable, employers must institute a series of measures intended to remove or reduce the risk associated with manual handling tasks. These measures strongly reflect an ergonomics approach to risk assessment and reduction, seeking to avoid the risk of injury by improving the design of the workplace and working environment. Employers have relied on providing training in correct manual handling techniques as a means of controlling such risks. Although it is now recognised that this is not the best approach, situations continue to arise where some reliance must be placed on the use of correct techniques. Training has focused on two-handed, symmetrical lifting, but this is inappropriate or inapplicable in many instances.

This research has examined two issues: the scientific principles underlying two - handed lifting training, considering their validity, whether they required modification in the light of current scientific knowledge and whether any additional principles could be identified; and other forms of lifting (e.g. one - handed lifting), examining the relevance of the same principles and determining scientifically - based priorities, where aspects of the lifting task meant that not all principles could be adhered to.

Focus groups were held with manual handling trainers and others concerned with the day to day control of manual handling hazards. These identified handling activities where conventional lifting training was inappropriate. The scientific literature was scanned and summarised to inform discussions on handling principles. A 'Delphi' exercise was undertaken, consulting 37 national and international experts from a variety of disciplines relevant to manual handling training, to establish a consensus on the basic physical and behavioural elements of good handling principles. There was a broad consensus for the underlying principles for conventional lifting. These either supplemented or refined those presented in the current Guidelines to the Regulations, L23 (1998).

The consultation process on non-standard lifting situations was less successful and provided less consensus over the best advice. Therefore, an additional literature search was undertaken to identify different lifting scenarios, using the findings to present guidelines and practical guidance to be applied in situations where conventional two-handed symmetrical lifting is not possible.

The report from this work has been published in HSE's Research Report series as [RR97](#)

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□ PEDESTRIAN SLIPPING – SLOPES AND ENCUMBRANCE

(Contractor: Health and Safety Laboratory)

It is widely accepted that slips, trips and falls on the level (STFL) are a leading cause of industrial injury in the UK. Recent HSE statistics have shown that 31% of non-fatal major injuries and 20% of over - three day injuries in UK workplaces were the result of STFL accidents. Previous HSE-funded research into the causes and means of prevention of pedestrian slips has resulted in the formation of a significant knowledge base concerning the slipperiness of flooring surfaces contaminated with fluid contaminants and dry, particulate material. These findings have fed directly into HSE guidance and into British Standards. The research undertaken to date has focused on the movement of unencumbered, able-bodied pedestrians on level ground. This work aimed to carry out a laboratory-based investigation into two aspects of pedestrian slipping that were previously poorly understood. The work has focused on the investigation of potential methodologies for the assessment of the slipperiness of inclined pedestrian walkways (ramps and slopes) and into the effects of encumbrance (i.e. carrying loads).

With regards to the assessment of existing slip resistance test methods for use on inclined floor surfaces, the findings suggest that the FSC2000 and GMG100 'sled-type' Coefficient of Friction (CoF) tests are not suitable for assessment of pedestrian slip risk on inclined walkway surfaces. However, the pendulum CoF produced accurate CoF data relating to the slipperiness of floor surface materials, regardless of the inclination of the floor surface under study (provided that the pendulum frame is maintained at 0° to the horizontal during testing, within the range +10° to -10° inclination).

From studying the effects of central and off-centre encumbrance on pedestrian slipping, the data has suggested that encumbrance does increase the risk of pedestrian slipping and that an off-centre encumbrance (e.g. the carriage of a bag via a shoulder strap) poses a higher slip risk than a central encumbrance (e.g. a centrally positioned rucksack).

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□ EXAMPLES OF RECENTLY COMPLETED PROJECTS

□ PERCEPTIONS OF, AND TRUST IN, HSE AS A RISK REGULATOR

(Contractor: University of East Anglia)

High levels of social trust are required for HSC/E to be effective in informing and working with the general public on risks to health and safety. Little research or available evidence exists with which to assess the extent to which specific risk regulatory institutions and agencies, such as HSE, have a 'trust profile' that is distinct from Government in general. The work undertaken on this project sought to elicit views on a range of issues related to HSE from a representative sample of the general public. A combined methods approach was used, comprising a qualitative study (30 focus groups drawn from 6 geographic locations in Great Britain, total n=202) and a quantitative survey (drawn from three geographic locations, South Yorkshire, South Wales and Norfolk, total n=304).

From the qualitative study, most participants were aware of HSE, although levels of awareness were lower amongst young adults. Specific awareness was derived from mass media sources and was mainly limited to HSE's accident investigation activities. Few had detailed knowledge and understanding of HSE's role and remit. Where present, this had originated from experiences of inspection activity and was mainly confined to those working in the industrial and manual sectors. Knowledge of HSE's policy and research functions appeared low. Many respondents expressed the view that an absence of state regulation of health and safety would increase the risks to employees and the public. Perceptions of HSE were positive and levels of trust were relatively high, influenced by the fact that HSE was thought: to act in the public interest; to raise awareness of health and safety issues rather than denying or playing down hazards; and to be independent and unbiased. Views collected across different occupational groups showed perceptions to be broadly similar to those of the general public. However, the self employed and certain manual workers expressed concern at specific regulations that hampered or interfered with workplace practice. Also, farmers expressed the need for practical information to reduce workplace risks, particularly for children, but they were sceptical of 'interfering' or unnecessary inspections.

The quantitative survey indicated that there was a strong belief that health and safety at work required regulation and that this should constitute a responsibility of the State. Although still positive, the response from young persons and those in South Wales indicated less desire for State regulation, which may reflect broader perceptions of the State and central Government. Awareness of HSE was high (professional and managerial groups and skilled manual workers were found to have significant awareness of HSE) and insight into HSE's activities was comparable or slightly above that of other Government regulators. Levels of trust in HSE were relatively high in comparison to other risk regulatory bodies and related stakeholder groups. There was consensus (no socio-demographic variability) about HSE's trust profile, which was considered to be similar to that of health care and other related organisations. The full report from this work will be published shortly in HSE's Research Report series.

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□ FAÇADE RETENTION: GOOD PRACTICE GUIDANCE

(Contractor: Construction Industry Research & Information Assoc'n [CIRIA] with Ove Arup & Partners) Sponsored jointly by HSE and CIRIA core members, this project was undertaken against a background of major anxiety over safety in the construction industry and an increased interest in refurbishment work. The aim of the project was to provide authoritative guidance on the subject of façade retention for building teams as a whole to be used on schemes of varying size and complexity.

The first programme of work was concerned with a broad consultation, case study reviews and literature reviews. The information collected was then distilled into a draft report, which was used as background to an industry workshop, attended by over thirty key individuals. The workshop focused on those aspects for which it was considered important to discuss and have informed views about. These included some design issues (such as wind loads, detection limits and % lateral load allowance), health and safety matters and management issues.

Two outputs have been produced and these will be published by CIRIA in May 2003. The main document is an extensive, comprehensive report that covers all aspects of the subject. The report provides key recommendations for both organisational and technical areas when dealing with façade retention projects. The issues of responsibility and the importance of maintaining a continuous thread through the various stages of concept, design and implementation are considered. A shorter report, using relevant material from the main report and aimed specifically for site use, has also been produced.

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□ EXAMPLES OF RECENTLY COMPLETED PROJECTS

□ SAFETY REPORT REGIME – EVALUATING THE IMPACT ON NEW ENTRANTS TO CONTROL OF MAJOR ACCIDENT HAZARD REGULATIONS (COMAH)

(Contractor: Entec UK Ltd.)

This study aimed to collect data regarding the implementation of COMAH, including: views and perceptions of duty holders on positive and negative effects of COMAH regulations; how requirements to compile a COMAH safety report impacted on the management of major hazards; and types of arrangements (hardware/systems) that are implemented as a result of compiling a COMAH safety report. A group of new entrants to COMAH were identified as the ideal target group. Counterfactual groups from existing top and lower-tier establishments were also included to ensure that comparisons could be made that would indicate true impact of the safety report. Questionnaires were sent to 303 establishments and the response rate was 50%, with 66% for the target group. A number of interviews were also carried out. The responses showed that 90% of establishments had changed the arrangements for managing major accident hazards as a result of COMAH. During the interviews, 55% of the participants commented that without COMAH these changes would not have happened or would have taken much longer to implement. In addition, 75% of survey participants commented that further changes were planned. Whilst implementing COMAH, new entrant top-tier establishments had made more discoveries regarding major accident hazard scenarios and omissions to existing arrangements than other groups. Top-tier establishments had been more rigorous in their analysis and subsequently developed more comprehensive systems to support COMAH than lower tier establishments. This suggested that writing a safety report had an impact in its own right in the management of major accident hazards. The financial impact of COMAH on industry was considerable, with a total estimate, excluding inspection charges, of £627 million (at the date of writing the report). Cost was an issue with 49% of respondents reporting that the cost of COMAH was excessive given the benefits achieved, whilst 26% were broadly happy. The objectives of COMAH, requiring operators to demonstrate that they have taken all measures necessary to prevent and mitigate major accidents was widely accepted as a good thing and one for which legislation was required to ensure that it happened. The majority of survey participants reported more positive than negative comments, and were generally happy with the principles being followed. This work concluded that COMAH has significantly changed the way major accident hazards were managed, but at significant cost. Judgement as to whether this represented value for money was finely balanced. The report from this work will be published shortly in HSE's Research Report series.

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□ REACTOR PRESSURE RELIEF OF FLUIDS CONTAINING SUSPENDED SOLIDS

(Contractor: Hazard Evaluation Laboratory Ltd.)

This project has considered the effects of the addition of inert suspended solids (fine glass particles) to both reacting (water and acetic anhydride) and non-reacting (pure water or water/glycerol) systems. Both 1 and 10 L reactors, connected to a catch tank via a vent line and orifice nozzle (range: 2 to 10.5mm) were used. A pneumatically actuated ball valve, sited downstream of the nozzle acted as a relief device without restricting the flow. Solid glass beads (4-45 μm to 250-425 μm) and hollow beads (0-65 μm) were used, giving particle to nozzle ratios of between 0.002 and 0.169. Depressurisation profiles from experiments with solids were compared to analogous profiles from experiments without solids. Replicate tests were performed and these showed that temperature and pressure profiles were repeatable. The results from pure water tests showed that they were not influenced by the presence of solids (up to 16% v/v) and that liquid was vented preferentially to the solids. This was observed for solids that were more or less dense than the liquid. With reacting solids, the implication from this was that calorimetry studies (required to obtain the information for vent sizing) would be very difficult to define. With reacting systems, glass beads increased the phi factor of the system and reduced the reaction runaway rate. During rapid runaway, the glass temperature lagged behind that of the liquid. Similarly, heat transfer to the reactor body may cause the reactor temperature to lag behind the reacting liquid. A general conclusion from these studies was that, for the experimental conditions examined, inert solids had little influence on observed reactor depressurisation rates. For the limited range of conditions studied, the vent sizing methodology defined in DIERS could be used with the same confidence for three-phase as for two-phase discharges. The effects of differential venting of solids may need to be further considered. The report from this work will be published shortly in HSE's Research Report series.

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□ PROJECT LISTING

NEWLY COMMISSIONED PROJECTS: JANUARY – MARCH 2003		
Project No	Project Title	Project Officer
Block 1 - Priority Programmes		
R33.110	Decision support system for structural refurbishment	Mr G Ogilvie. Tel: 020 7717 6966 gordon.ogilvie@hse.gsi.gov.uk
R54.085	Defining a case of 'work-related stress'	Dr C MacKay. Tel: 0151 951 4565. colin.mackay@hse.gsi.gov.uk
R55.102	Effective management of upper limb disorders	Dr M Woods. Tel: 0151 951 3256 mark.woods@hse.gsi.gov.uk
R68.085	Measuring the effectiveness of competency-based education and training programmes in changing the manual handling behaviour of healthcare staff	Ms D Brown. Tel: 020 7717 6037 dorothy.brown@hse.gsi.gov.uk
Block 2 - Work in the Major Hazards Industries		
R04.091	Fire testing of intermediate bulk containers	Dr S Welsh. Tel: 0151 951 4784 shaun.welsh@hse.gsi.gov.uk
R05.111	Fireworks: Bulk storage and transport hazards (CHAF)	Dr S Welsh. Tel: 0151 951 4784 shaun.welsh@hse.gsi.gov.uk
R31.087	High rate sheet tensile tests including ESIS round robin.	Mr A Jackson. Tel: 0114 291 2453 alan.jackson@hse.gsi.gov.uk
R32.094	Joint industry project – Acoustic emission for in-service monitoring of structural integrity for large structures	Mr A Jackson. Tel: 0114 291 2453 alan.jackson@hse.gsi.gov.uk
R64.094	Evaluation of railway safety case regulations	Ms P Stenhouse. Tel: 0151 951 3888. pauline.stenhouse@hse.gsi.gov.uk
R71.056	ACUTEX: Acute exposure threshold levels	Dr S. Welsh. Tel: 0151 951 4784. shaun.welsh@hse.gsi.gov.uk
R71.057	FN curves and criterion lines for railways and other modes of transport	Mr D Tee. Tel: 020 7717 6923. dave.tee@hse.gsi.gov.uk
4028	Extended processing of full scale measurements from an offshore drilling and workover rig	Mr R White. Tel: 020 7717 6782. robert.white@gsi.gov.uk
4039	Seismic monitoring of UKCS including North West Atlantic	Mr V Karthigeyan. Tel: 020 7717 6773 v.karthigeyan@hse.gsi.gov.uk
4041	Proposal to improve and validate the Design Capability Maturity Model by stakeholder involvement	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
4045	Identification of factors affecting quality of life in divers and offshore workers	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
4047	Review of methods for demonstrating redundancy in dynamic positioning systems	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
Block 3 - Compliance		
R32.095	Replacement of radiography by ultrasonic inspection	Mr G Hughes. Tel: 0151 951 4005 graeme.hughes@hse.gsi.gov.uk
R32.096	Evaluation of CEN ultrasonic technique standards for in service inspection	Mr H Bainbridge. Tel: 0151 951 4651. harry.bainbridge@hse.gsi.gov.uk
R32.100	Safety implications of time of flight diffraction (TOFD) for in-manufacture inspections	Mr H Bainbridge. Tel: 0151 951 4651. harry.bainbridge@hse.gsi.gov.uk
R36.194	Safety of platform lifts	Ms C Goddard. Tel: 0161 952 8200 christina.goddard@hse.gsi.gov.uk
R41.128	Determine a methodology for using flue gas analysers to assess the combustion performance of domestic gas appliances	Mr A Jones. Tel: 0151 951 3273 allyn.jones@hse.gsi.gov.uk
R43.088	Respirator filter performance – Effect of intermittent and mixed challenge atmospheres	Dr B Rajan. Tel: 0151 951 3318. bob.rajan@hse.gsi.gov.uk
R45.080	Control of whole body vibration exposures for drivers of quarrying vehicles	Mr P Brereton. Tel: 0151 951 4824. paul.brereton@hse.gsi.gov.uk
R51.238	Procurement of welding data – Phase 2	Dr A Phillips. Tel: 0151 951 4753. andy.phillips@hse.gsi.gov.uk
R51.243	Managing asbestos in premises~: identification of duty holders	Mr I Gooday. Tel: 0151 951 6269 ian.gooday@hse.gsi.gov.uk
R51.244	Trends in inhalation exposure: Mid 1980's to the present	Dr A Phillips. Tel: 0151 951 4753. andy.phillips@hse.gsi.gov.uk
R68.084	Occupational health and safety enforcement strategies to promote concordance in the hospitality industry	Mr G Broughton. Tel: 020 7717 6828 gareth.broughton@hse.gsi.gov.uk

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NEWLY COMMISSIONED PROJECTS: JANUARY – MARCH 2003		
Project No	Project Title	Project Officer
Block 4 - Mandatory Activities		
R51.241	In vitro dermal absorption of Diazinon and Propetamphos	Mr S Dixon. Tel: 0151 951 4611. steve.dixon@hse.gsi.gov.uk
R53.195	Measurement and analysis of magnetic fields from welding processes	Mr R Olsen. Tel: 020 7717 6243. rob.olsen@hse.gsi.gov.uk
R53.196	Development of revised Faculty of Occupational Medicine (FOM) guidelines on hand arm vibration syndrome	Mr D Fletcher. Tel: 020 7717 6004. david.fletcher@hse.gsi.gov.uk
R62.097	Evaluation of the small firms allowance scheme	Mr R Olsen. Tel: 020 7717 6243. rob.olsen@hse.gsi.gov.uk
R63.065	Perceptions of the cost implications of health and safety failures	Mr R Olsen. Tel: 020 7717 6243. rob.olsen@hse.gsi.gov.uk
R68.081	The development of a health and safety management index for use by stakeholders	Ms D Spooner. Tel: 020 7717 6664 debbie.spooner@hse.gsi.gov.uk
P56.075	HSE annual accident questions in the labour force survey	Ms D Spooner. Tel: 020 7717 6664 debbie.spooner@hse.gsi.gov.uk
R56.100	A review of the occupational health and safety of Britain's ethnic minorities	Ms K Abba. Tel: 0151 951 3658 katherine.abba@hse.gsi.gov.uk

RECENTLY COMPLETED PROJECTS: JANUARY – MARCH 2003		
Project No	Project Title	Project Officer
Block 1 - Priority Programmes		
R33.084	Retention of facades – Best practice guide	Mr D Thomas. Tel: 0161 952 8200 david.thomas@hse.gsi.gov.uk
R33.095	Pilot study – The effects on the workforce of installing temporary cladding to a structure	Mr A Maitra. Tel: 0151 951 4634 hash.maitra@hse.gsi.gov.uk
R53.176	Pedestrian slipping – Slopes and encumbrance	Ms G Spurrier. Tel: 0114 291 2300 gillian.spurrier@hse.gsi.gov.uk
R55.094	Principles of good manual handling – Achieving consensus	Mr C Quarrie. Tel: 0151 951 3052 chris.quarrie@hse.gsi.gov.uk
Block 2 - Work in the Major Hazards Industries		
R02.060	The acoustic effect in vented explosions	Mr J Hazeldean. Tel: 0151 951 4009 john.hazeldean@hse.gsi.gov.uk
R04.076	Size effect of impact/fire on flammable liquid receptacles	Dr S Kirton. Tel: 020 7556 2174 steve.kirton@hse.gsi.gov.uk
R05.089	INNOVATOR	Ms J Etchells. Tel: 0151 951 4764 janet.etchells@hse.gsi.gov.uk
R05.098	Health hazards from the emissions of fireworks and theatrical pyrotechnics	Mr A Duckworth. Tel: 0151 951 4018 alan.duckworth@hse.gsi.gov.uk
R05.101	Reactor pressure relief of fluids containing suspended solids	Ms J Etchells. Tel: 0151 951 4764 janet.etchells@hse.gsi.gov.uk
R05.109	Revision of the safety report assessment guide for explosives	Dr R Merrifield. Tel: 0151 951 4804 roy.merrifield@hse.gsi.gov.uk
R41.110	Stagnant regions in naturally ventilated offshore modules	Mr M Brearley. Tel: 0151 951 3140 martin.brearley@hse.gsi.gov.uk
R48.114	Diesel fumes and particulates in mines – Phase 3	Mr M Williams. Tel: 0151 951 4866 mansel.williams@hse.gsi.gov.uk
R52.140	Toxic gases and bioaerosols on landfill sites - Exposure of workers and spread to the environment	Mr T Taylor. Tel: 0151 951 3812. tom.taylor@hse.gsi.gov.uk
R64.093	COMAH safety report regime – Evaluating the impact on new entrants	Mr R Thomas. Tel: 0151 951 4823 richard.thomas@hse.gsi.gov.uk
R67.140	Virtual reality for mine operations and safety	Mr S Denton. Tel: 0151 951 4331 steve.denton@hse.gsi.gov.uk
R67.152	Competence assessment in hazardous industries	Mr J Wilkinson. Tel: 0151 951 3041 john.wilkinson@hse.gsi.gov.uk
R71.040	Experimental data acquisition for validation of a new vapour cloud fire (VCF) modeling approach	Mr D Painter. Tel: 0151 951 3570 david.painter@hse.gsi.gov.uk
R72.057	Development of a targeted technique to assess COMAH safety reports	Ms C Flanagan. Tel: 0151 951 4359 christine.flanagan@hse.gsi.gov.uk
3736	Evaluation of the effects of self managed teams on health and safety	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk

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RECENTLY COMPLETED PROJECTS: JANUARY – MARCH 2003		
Project No	Project Title	Project Officer
Block 2 - Work in the Major Hazards Industries (cont.)		
3771	An energy concept for assessing the robustness of blast walls	Mr R Martland. Tel: 0151 951 3082 roland.martland@hse.gsi.gov.uk
3801	Step change in safety: Behavioural factors in safety management	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3806	The development of a manual handling toolkit for FPSO design and specification	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3860	Review of the performance of high strength steels used offshore	Mr A Stacey. Tel: 020 7717 6774 alex.stacey@hse.gsi.gov.uk
3900	ISO load factor calibration joint industry project	Mr M Birkinshaw. Tel: 020 7717 6775 malcolm.birkinshaw@hse.gsi.gov.uk
3902	On-line diving bell monitor	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
3913	Helideck design guide – environmental effects	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3914	Human factors capability assessment	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3936	Technical performance measures for fixed jacket structures	Mr A Stacey. Tel: 020 7717 6774 alex.stacey@hse.gsi.gov.uk
3945	Development of standards of good management practice and task-based risk assessment tool for offshore and onshore occupational stressors	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3958	Fatigue, health and injury among merchant seafarers and shorebase maintenance staff workers on offshore installations – Phase 2	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3960	Identifying and eliminating ergonomic risks offshore: A resource pack for safety personnel	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3967	Visible gas turbine exhausts – onshore trials	Mr B Ralph. Tel: 020 7717 6786 bill.ralph@hse.gsi.gov.uk
3971	Update of crane data system	Mr J Macfarlane. Tel: 01224 252500 jim.macfarlane@hse.gsi.gov.uk
3978	Preliminary study of emergency breathing systems	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3983	Development of a methodology for the assessment of human factors issues relative to slips, trips and fall accidents in the offshore industries	Mr B Ogden. Tel: 0151 951 3544 bernard.ogden@hse.gsi.gov.uk
3989	Validation of the human factors capability model	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3997	Competence assurance project	Mr B Ogden. Tel: 0151 951 3544 bernard.ogden@hse.gsi.gov.uk
4005	Sensitivity of jack-up reliability to wave-in-deck load calculation	Mr W Jones. Tel: 020 7717 6796 wayne.jones@hse.gsi.gov.uk
4012	Offshore loading of shuttle tankers with respect to the safety of human life, the environment and the frequency of collision	Mr M English. Tel: 020 7717 6783 max.english@hse.gsi.gov.uk
4014	Report on the mutual misconceptions of designers and operators	Mr R Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
4031	SBV daughter craft and launch systems	Mr G Boothby. Tel: 020 7717 6921 george.boothby@hse.gsi.gov.uk
4034	Review of the economic aspects of the ERTMS project team report	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
4035	Public views on train protection	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
4036	The significance of intermetallic and nitride precipitates in duplex and superduplex stainless steels	Mr C Robbins. Tel: 01224 252500 chris.robbins@hse.gsi.gov.uk
4040	Human factors in lifting operations	Mr J Macfarlane. Tel: 01224 252500 jim.macfarlane@hse.gsi.gov.uk
Block 3 - Compliance		
R41.108	NOVOZONE – Novel techniques for the determination of ozone levels	Mr A Griffin. Tel: 0151 951 4674 adrian.griffin@hse.gsi.gov.uk

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RECENTLY COMPLETED PROJECTS: OCTOBER - DECEMBER 2002		
Project No	Project Title	Project Officer
Block 3 - Compliance (Cont.)		
R43.075	EU validation of substance emission for machinery	Dr B Rajan. Tel: 0151 951 3318 bob.rajan@hse.gsi.gov.uk
R43.083	Prediction of vapour filter lifetime	Dr B Rajan. Tel: 0151 951 3318 bob.rajan@hse.gsi.gov.uk
R43.085	Respiratory filter performance – Laboratory evaluation	Dr B Rajan. Tel: 0151 951 3318 bob.rajan@hse.gsi.gov.uk
R51.236	Managing asbestos in premises: Identification of Duty holders	Mr I Gooday. Tel: 0151 951 6269 ian.gooday@hse.gsi.gov.uk
R52.144	Controlling noise in foundries – Best practice guidelines	Mr P Harvey. Tel: 02920 263000 paul.harvey@hse.gsi.gov.uk
R53.127	Development of methods for biological monitoring	Mr A Griffin. Tel: 0151 951 4674 adrian.griffin@hse.gsi.gov.uk
R67.154	An ergonomic assessment of unsupervised petrol filling stations	Ms M Buchan. Tel: 020 7717 6441 moira.buchan@hse.gsi.gov.uk
R72.068	Tanning parlour inspection tool	Mr M Thomas. Tel: 020 7717 6686
Block 4 - Mandatory Activities		
R43.084	Identification of reasons for failure mode of control strategies	Mr P Evans. Tel: 0151 951 3281 paul.evans@hse.gsi.gov.uk
R45.063	Assessment of exposure to hand-transmitted vibrations	Mr P Brereton. Tel: 0151 951 4824 paul.brereton@hse.gsi.gov.uk
R45.070	Rammer vibration – Correlation between laboratory and workplace	Mr P Brereton. Tel: 0151 951 4824 paul.brereton@hse.gsi.gov.uk
R46.083	Internal contamination of gloves – routes and consequences	Mr P Evans. Tel: 0151 951 3281 paul.evans@hse.gsi.gov.uk
R47.017	Radioactive Materials Transport Event Database (RAMTED)	Mr A Barrett. Tel: 0151 951 4819. arwel.barrett@hse.gsi.gov.uk
R51.116	Dermal exposure measurements of indoor pesticide products	Dr J O'Hara. Tel: 0151 951 4533 julia.o'hara@hse.gsi.gov.uk
R51.196	Incorporating individual variability in the interpretation of biological monitoring guidance values	Mr G Cartlidge. Tel: 0151 951 3820 george.cartlidge@hse.gsi.gov.uk
R51.202	Workshop on the susceptibility and variability in human response to occupational exposure to chemicals	Dr J Delic. Tel: 0151 951 3593 julian.delic@hse.gsi.gov.uk
R51.206	A meta-analysis of cancer risk following exposure to airborne polycyclic aromatic hydrocarbons (PAHs)	Dr D McElvenny. Tel: 0151 951 3352 damian.mcelvenny@hse.gsi.gov.uk
R51.212	Human variability and models of chemical toxicity	Dr J Delic. Tel: 0151 951 3593 julian.delic@hse.gsi.gov.uk
R52.136	Pilot study – Air sampler/biosensor for genetically modified viruses	Dr P Logan. Tel: 0151 951 4767. paul.logan@hse.gsi.gov.uk
R53.185	Exposure of people to non-optical, non-ionising radiation in readiness for a possible EU Directive on electromagnetic fields and radiation	Mr N Smith. Tel: 020 7717 6277 norman.smith@hse.gsi.gov.uk
R64.062	Public perception of, and trust in, HSE as a regulator	Dr L Golob. Tel: 020 7717 6461 laurence.golob@hse.gsi.gov.uk
R71.045	Risk communication for preventative behaviours	Mr D Rickwood. Tel: 020 7717 6671 david.rickwood@hse.gsi.gov.uk
R71.052	Health and safety information in annual reports	Mr S Vinton. Tel 020 7717 6954 steve.vinton@hse.gsi.gov.uk
R73.021	Aspects of fire-fighter training	Mr A Moore. Tel: 0151 951 3360 andrew.moore@hse.gsi.gov.uk

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