

MAINSTREAM RESEARCH NEWS



THE NEWSLETTER FOR HSE'S S&I PROGRAMME

ISSUE 23

JANUARY 2003

□ EUROPEAN COMMISSION PUBLISHES THE FIRST CALL FOR PROPOSALS FOR THE SIXTH FRAMEWORK PROGRAMME

The Sixth Framework Programme (FP6) is the European Union's main instrument for funding research in Europe. Proposed by the European Commission and adopted by the Council and Parliament in co-decision, FP6 is open to all public and private entities, large or small. The overall budget for the four-year period 2003 to 2006 is €17.5 billion (equivalent to approximately £11.5 billion). This represents an increase of 17% from the previous Fifth Framework Programme and is equivalent to 3.9% of the Union's total budget. There are no national quotas for FP6 funds.

The main focus of FP6 is the creation of a European Research Area (ERA) as a vision for the future of research in Europe. Its aim is to achieve scientific excellence, improved competitiveness and innovation through increased co-operation, greater complementarity and improved co-ordination between relevant parties, at all levels.

The first call for FP6 proposals, representing a total budgetary allocation of €5 billion, was announced on 16 December 2002. Most of this first allocation (€3.4 billion) will be focused on seven priority areas, aimed at integrating and strengthening the ERA. These are: 1 – Life sciences, genomics and biotechnology for health; 2 – Information Society Technologies; 3 – Nano-technologies and nano-sciences, knowledge-based multi-functional materials, and new production processes and devices; 4 – Aeronautics and Space; 5 – Food quality and safety; 6 – Sustainable Development, Global Change and Ecosystems; and

7 – Citizens and governance in a knowledge-based society.

These priorities reflect the result of a thorough consultation with Member State authorities as well as with the EU scientific and industrial community. They address major scientific, industrial and societal challenges while reflecting the EU's overall ambition to concentrate on fewer priorities and activities. The aim is to gather the necessary resources available for building up the critical mass required for success in the competitive international environment.

For further information on FP6 and details of the first call for proposals, please consult the Cordis website at the following URL:

<http://www.cordis.lu/fp6>

The European Agency for Safety and Health at Work has prepared an overview of the occupational safety and health elements of FP6. This has been published on their website at the following URL:

<http://agency.osha.eu.int/research/framework>

For any other enquiries on this topic, please contact:

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In this Issue...

What's new?

Pages 2 - 4

Examples of Recently Completed Projects

Pages 5 - 7

Project Listings: Newly Commissioned and Completed Projects. Recent Publications.

Pages 8 - 10

□ WHAT'S NEW?

□ RESEARCH TO EVALUATE DIFFERENT MANAGEMENT STRATEGIES FOR POST TRAUMATIC STRESS DISORDER

(Contractor: Institute for Employment Studies)

Liability relating to psychiatric illness is of increasing concern to employers as legislation has clarified the duties of employers regarding the psychological well-being of employees.

Due to this, techniques such as debriefing and defusing are becoming increasingly widespread. However, there is little evidence as to which approaches have a consistent and positive outcome in terms of reducing or preventing the onset of trauma symptoms. In addition, the results of such research are largely contradictory. There is also a gap in existing research into the efficacy of such techniques in an occupational setting.

This work will investigate the impact of defusing (intervention within the same day as the incident) against debriefing (intervention a few days after the incident) without re-exposure to the incident, and debriefing with re-exposure to the incident.

The work will develop a sound methodological approach to establish the efficacy of defusing, debriefing and other reduction techniques and will evaluate current techniques in a workplace setting.

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□ THE PROVISION OF HEALTH AND SAFETY INFORMATION THROUGH COMPANY ACCOUNTS, ANNUAL REPORTS AND OTHER PUBLICLY AVAILABLE DOCUMENTS

(Contractor: System Concepts Ltd)

Public reporting of health and safety information is considered by a wide range of stakeholders to have a vital role in raising the profile of health and safety with company boards, directors, employees and others, so promoting and encouraging greater corporate responsibility for health and safety.

HSC published guidance in March 2001 to support the 'challenge' to the top 350 UK companies to publicly report on their health and safety policies, targets and performance from 2002 onwards. The challenge, set down in Action point 2 of Revitalising Health and Safety by the Government and HSC, is seen as playing a key part in HSE's work to achieve the national targets for improvement in health and safety.

System Concepts previously carried out a baseline survey in 2001 to establish existing practice and the standard of reporting amongst the top 350 UK companies. The results of this initial work were published as [CRR446](#)

This new project will compare the current level of reporting with that found in the baseline survey and will examine the quality of reports produced by companies measured against the HSC guidance.

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□ AN INVENTORY OF FIBRES TO CLASSIFY THEIR POTENTIAL HAZARD AND RISK

(Contractor: Health and Safety Laboratory)

Previous exposure to airborne asbestos fibres is at present by far the largest cause of industrially related cancers in the UK. However, asbestos is not the only hazardous fibre type and other types of mineral fibre (such as fibrous zeolites) and man-made vitreous fibres (e.g. refractory ceramic fibres) have also been shown to cause cancer.

The marketing and use of products and substances to which asbestos was intentionally added was prohibited in the UK from the end of 1999, and although a few industries were allowed additional time to find suitable alternative fibres, many products were already using substitute fibres. The health implications of existing and some of the new substitute fibres have not been systematically assessed, and, if like asbestos, they result in lung disease many years after exposure, the risk would have been avoidable if current knowledge gained from studies of asbestos and man-made vitreous fibres had been applied.

The idea of an inventory of fibres is to first find out the types and specifications of fibres that are available for commercial use, and then, by applying procedures developed for assessing man-made vitreous fibres, assess their potential to cause harm. The assessment will be based on data available from the manufacturer and on targeted laboratory tests to determine the fibre size distribution, solubility and the releasability of selected fibres.

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□ WHAT'S NEW?

□ SAFETY IMPLICATIONS OF EUROPEAN RISK BASED INSPECTION AND MAINTENANCE METHODOLOGY

(Contractor: Mitsui Babcock Engineering)

There is an increasing industrial interest in the adoption of risk based inspection and maintenance (RBIM). This is partly due to potential cost savings from the reduced scope of inspection and increased inspection and maintenance intervals. Other potential benefits are the focusing of efforts on those components where safety and environmental risks are highest. It is clear from other HSE sponsored work that there are large differences between methodologies adopted, not only across Europe, but also within the UK itself. Many of these methodologies concentrate on risks of corrosion and pay little attention to other risks associated with mechanical damage such as fatigue. Good practical models that address issues such as inspection effectiveness, coverage and intervals are not presently available.

A consortium of 16 companies is to be part funded by the European Commission to develop and demonstrate 'Risk Based Inspection and Maintenance Procedures for European Industry' (RIMAP). By buying into this project, HSE aims: to keep up to date with progress of the RIMAP project; to assess any safety related implications of the RIMAP project for UK industry; and to offer a regulatory view to the RIMAP project consortium.

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□ USE OF TEMPORARY THRESHOLD SHIFTS (TTS) IN VIBROTACTILE AND THERMAL SENSITIVITY AS INDICATORS OF THE SIGNIFICANCE OF HAND-ARM VIBRATION (HAV) EXPOSURES

(Contractor: Health and Safety Laboratory)

Existing methods of assessing the risks from exposure to HAVs are based on the measurement of vibration magnitude and exposure time in accordance with International Standard ISO 5349. Dissatisfaction with the existing standard is based on the frequency weighting used, which was originally developed using a small sample of subjects using the assumption that sensitivity is related to risk of damage. However, growing evidence suggests that the frequency weighting is not a good predictor of injury for all tools, due to it being heavily biased towards low-frequencies, such that it under-predicts the damage caused by tools which generate high frequency vibration (e.g. impactive tools) and under-values the benefits of reducing high frequency vibration components (e.g. using anti-vibration gloves).

TTS reflects a transient impairment of neurosensory function following hand-transmitted vibration and may be a precursor for the chronic impairment seen in HAV Syndrome sufferers. Assessment of TTS for vibrotactile and thermal perception may provide a means of evaluating the relative health risk of vibration exposure. TTS could also provide improved quantitative advice on workplace control measures.

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□ INVESTIGATING INFLUENCES ON SAFETY CLIMATE IN TRAIN OPERATING COMPANIES (TOCs)

(Contractor: Health and Safety Laboratory and University of East Anglia)

The occurrence of a number of major rail accidents in the relatively brief period since privatisation has raised concerns amongst certain stakeholders over railway safety standards, a number of which are identified in the recommendations of Professor Uff and Lord Cullen's Inquiry reports on rail safety and the Ladbroke Grove incident. A central question for HSE and the industry is whether the severity and nature of incidents following privatisation reflects a decline in safety standards.

To date, there has been no formal mapping of actual or foreseeable consequences of corporate motivations engendered by the current structure and their implications for health and safety standards. Little is known about how these variables may impact upon decision making and behaviour of operational staff, in particular implications for safety prioritisation, risk decision making and the extent to which they may cause deviation from rules, procedures and good practice.

This research aims to provide a detailed insight into this potentially complex issue. The project will focus on the activities of TOCs, but will encompass those bodies and organisations with whom TOCs interact. The work will examine the nature and range of influences that impact upon standards of safety behaviour in TOCs and will provide the necessary foundation for the development of more formal measures of safety culture and climate.

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□ WHAT'S NEW?

□ STRUCTURAL DETERIORATION OF TRACTOR SAFETY CABS WITH AGE

(Contractor: Silsoe Research Institute)

The potential risk of severe injury posed to agricultural tractor drivers by overturning incidents has been widely recognised for over 30 years. In an attempt to provide tractor operators with protection in the event of a rollover incident, the Agriculture (Tractor Cabs) Legislation was passed, which required all new tractors sold in the UK after September 1970 to be fitted with either safety cabs or roll-over protective structures (ROPS). Vehicles already in use at that time were required to be modified in order to comply with the Regulations from September 1977 onwards. The Regulations have been very successful in reducing the number of fatal accidents due to tractor overturns from around 60 per year in 1960 to less than 3 in 2002.

Concerns have recently been expressed about the structural deterioration of tractor safety cabs with age.

The aim of this project is to examine a range of tractors of different ages and from different manufacturers (reflecting the variety of tractors that are still in use today) to: identify the most common tractors in use with possible structural deterioration to safety cabs in the UK; to test a sample number of tractors to compare the results with the original tests when the cabs were new; and to identify possible causes of deterioration.

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□ BUND WALL OVERTOPPING AND DYNAMIC PRESSURES

(Contractor: Liverpool John Moores University)

Tanks used for bulk storage of hazardous liquids are often completely surrounded by a wall or earth embankment with the aim of providing secondary containment for any spillage from the tank.

If the walls of the bunded area have been designed, built and maintained in line with current standards, then they will provide full containment of the more likely spills. They will not contain the surge of liquid that would follow a catastrophic failure of the tank; even if the surge does not destroy the bund wall, the flood wave is likely to overtop it.

Whilst catastrophic failure of bulk storage tanks is rare, the consequences for site personnel, the local community and the environment can be severe. Such accidents have occurred in the USA, in Greece and in Lithuania, for example.

The purposes of this project are to build a laboratory facility allowing representation of an agreed range of tank and bund arrangements, to perform simulations of catastrophic failure of the tank, to measure the dynamic pressures that are exerted on the bund wall and the quantity of liquid that overtops it. The work will provide data to strengthen and underpin HSE's technical judgement of the containment capability of bunds around storage tanks and the work will assist HSE's development and validation of computer programs for studying liquid spreading and liquid/bund interactions.

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□ GENERIC MODEL AND CODE FOR THE ASSESSMENT AND DESIGN OF DIRECTED WATER DELUGE SYSTEMS FOR THE PROTECTION OF PRESSURE VESSELS

(Contractor: South Bank University)

Recent work to study the critical elements of directed water deluge systems for the protection of plant containing pressurised flammable materials (such as LPG tanks) has shown that the design specification currently used, which is essentially based on application rate, is overly simplistic and provides for a wide variability of performance and effectiveness of such systems. In order to provide confidence in the performance of directed water deluge systems, a more closely defined specification is required.

From research to identify the critical elements of such a system, it was recognised that there are too many variables to test experimentally and a computer simulation program has been developed to do this. The computer code has been proven to be a useful research tool, but it now requires conversion into a user-friendly form, which can be used by industry, fire protection engineers and inspectors alike to determine the adequacy of performance of existing industrial water deluge systems and in the optimal design of new directed water deluge systems for the protection of pressure vessels against specified (severe) fire scenarios.

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□ EXAMPLES OF RECENTLY COMPLETED PROJECTS

□ ERGONOMICS OF USING A MOUSE OR OTHER NON-KEYBOARD INPUT DEVICE

(Contractors: University of Surrey and Loughborough University)

A combination of methods to determine the extent to which different kinds of non-keyboard input devices (NKID) are currently in use, how they are used and problems that result were examined by this research. Evidence was collected through a literature review; a survey of IT and health and safety managers; workplace assessments involving interviews and observations with users in various companies; a survey of users; and laboratory work, including assessment of different devices, a trial comparing traditional and L-shaped desks with three different arm support conditions, and a case study investigating touch screen use.

The mouse was found to be the most widely used NKID with desktop computers and most users operated the mouse with their right hand. Other devices used include trackballs, touchpads and touchscreens. The majority of users had L-shaped desks and many users worked at more than one desk. Most NKID-use took place whilst users were undertaking common office tasks, including word processing, email, database work and information searching. Many users reported working at their computers for prolonged periods – exceeding 2 hours – without a break, although the majority had at least some discretion in organising work and when to take rests. Only a minority of users had received advice and training on the safe use of NKID. Complaints of pain or discomfort arising from NKID-use amongst employees had been received by 20% of the organisations surveyed, whilst 42% of the workplace assessment interviewees reported pain or discomfort attributable to NKID. The prevalence of NKID-related pain or discomfort among user questionnaire respondents was 19%. Other problems with NKID mentioned by users included: unsuitable size and shape of device; poor response and precision; complex device with too many controls; lack of cleaning or maintenance; mouse mats too small; and being prevented from, or not knowing, how to change the device software settings. Laboratory investigations found that working with the arm supported while using a device resulted in the lowest levels of muscle activity, although wrist extension remained a concern. Subjects rated working at an L-shaped desk as more comfortable than at a straight desk and preferred to work with their arm fully supported. These ratings were based on short duration exposures.

The report from this work has published in HSE's Research Report series as [RR045](#)

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□ AUDIT OF HSE'S OPENNESS PROCEDURES AND PRACTICES

(Contractor: University College London)

The work undertaken during this project was carried out in three phases and provided an independent audit of HSE's openness policies, procedures and practices, including sample quantitative studies, of staff attitudes towards openness and of stakeholder perception of HSE as an open organisation.

The first phase considered the suitability and effectiveness of HSE's existing administrative procedures within the current legal framework and included: relevant legal duties and Government policies; public notices and internal policies; releases of information in response to requests; publication of information; third party information; and complaints and appeals. The second phase considered the attitudes of staff and stakeholders towards HSE policy and procedure in order to assess openness between HSE and the outside world. The final phase of the work assessed the HSE website, in particular the services that supported HSE's policy on openness. This phase of the work utilised research conducted jointly by the London School of Economics and University College London for the National Audit Office (NAO) value for money study 'Government on the web,' published by NAO.

Key findings from the audit include: a good general awareness among HSE staff of the importance of openness, but also the legal requirements to protect confidential data; the existence of an Open Government framework, providing a good foundation for dealing with individual requests and proactively publishing information of public interest; most stakeholders consider HSE to be open and trustworthy, but some perceptions of bias towards employers' interests exist; recognition that HSE is trying to be more open, but that developing a more effective dialogue with stakeholders is essential; and HSE's website was found to rank highly in comparison with other Executive Body sites in UK central Government.

The three reports from the separate phases of this study have been published as [RR052](#) now available on HSE website

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□ EXAMPLES OF RECENTLY COMPLETED PROJECTS

□ THE SAFETY OF ROLL CONTAINERS

(Contractor: Health and Safety Laboratory)

Roll containers/cages/pallets are half pallet-sized platforms, with four running castors and a wire cage. They are used to transport goods in lorries between warehouses and retail stores, or within a shop, to move goods from storeroom to sales floor. Their use reduces manual handling, although the containers need to be manually handled in most situations. When fully loaded they carry up to 500kg of goods. Millions are estimated to be in use in the UK. Perhaps because of their wide use, they have become a significant source of accidents and this project was undertaken to: identify the scale and causes of roll container accidents; to advise on their design; to produce guidance on loading limits; and the design and use of tail lifts for use with roll containers.

Comprehensive statistics on accidents involving roll containers were not available, but incident data from a number of sources was examined to ascertain causes and numbers of accidents. Roll container accidents represent 3% of reported RIDDOR accidents in Sheffield, 30% of manual accidents to sales assistants referred to the Royal Liverpool University Hospital, 35% of reported accidents in one sector of a major distribution company, and 20% of reported accidents in a major supermarket chain. Injuries to hands and feet were most common, but back, arm, leg, shoulder and head injuries also occurred. The use of PPE (safety shoes and industrial gloves) would improve safety.

A number of design features were identified to help reduce the occurrence of accidents, such as: larger diameter wheels to reduce pushing/pulling forces and to make the wheels less sensitive to imperfections in the surfaces on which containers are used; the incorporation of handles to move fingers and hands away from the corners of containers and to move feet further away from the container when containers are pulled, reducing the risk of foot injuries; marked load height limits so the operator has a clear view when containers are pushed; and the positioning of castors close to corners to improve stability.

On flat, level surfaces, the force needed to move a container would be 2% of the load with wheels aligned in the direction of travel and 5% with wheels at 90°. A 500kg load requires a starting force of 250 N. This is within the maximum force that male operators would be asked to handle, but the maximum for female operators is 160N. On slopes, the operator has to overcome a force proportional to the load and the slope and a 400kg load on a 1 in 12 slope would require a force of 330 N.

Loading and unloading lorries using tail lifts is a significant source of accidents causing the most serious injuries. Accidents can be reduced by loading and unloading on flat ground or in loading bays, through the restraint of roll containers, by having well maintained tail lifts with side and end ramps or stops and restraining straps and by ensuring that workers are away from the hazard zone when tail lifts are used. The report has been published as [RR009](#) in HSE's Research Report series.

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□ ANALYSIS OF COMPENSATION CLAIMS RELATED TO HEALTH AND SAFETY ISSUES

(Contractor: System Concepts Ltd)

Compensation claims can be a valuable source of information about health and safety at work, highlighting where problems exist and suggesting possible remedial action and preventative strategies. The aim of this project was to collect and analyse information on the costs and type of health and safety (accident and injury-related) compensation claims conducted via trade unions and law firms. Specific objectives were to consider: the main types of claim; the main injuries sustained; the industrial sectors with the greatest proportion of claims; the work activities that gave rise to the most claims; the breaches of health and safety regulations were most common; the average cost of a claim; and the length of time to settle a claim. A total of 488 claims from five trade unions (ASLEF, FDA, ISTC, MU and NGSU) were examined together with summary data on 121,000 claims from a further three trade unions (TGWU, UNISON, USDAW). The study found that the main types of claim were in relation to slips, trips and falls, stress, manual handling and noise. Injuries caused included unspecified pain, sprains or strains, deafness and cuts. Those sectors found to have the most claims were local government and the health, railway and metal work sectors. Because of the level of slips, trips and falls and manual handling incidents, the Workplace Health and Safety Regulations 1992 and Manual Handling Operations Regulations 1992 were the Regulations that were most likely to be breached. Claims took between 1 and 133 months to settle, with a mean of 30 months. Damages ranged from £1 to in excess of £1 million. The full findings of this study will be published shortly in HSE's Research Report Series.

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□ EXAMPLES OF RECENTLY COMPLETED PROJECTS

□ A STUDY OF THE USE OF EPOXY RESINS IN THE CONSTRUCTION INDUSTRY

(Contractor: The Welding Institute)

Epoxy resins are one of the most important and widely used types of polymeric systems. They are used in adhesives, paints and coatings, sealants, inks, fillers, reinforced polymer composites and varnishes. They are known to cause skin sensitisation and photosensitisation (light-responsive dermatitis) of skin on the hands, arms, face and neck. This adverse reaction may be due to the base epoxy resin, curing agents, diluents or other constituents in the formulation. The potential for sensitisation in construction workers is of particular concern and this project was commissioned to undertake a literature/information review and industrial survey to assess skin sensitisation due to epoxy resin use.

From the literature and available information, the basic chemistry and formulation of epoxy resins, the main constituents and their contribution to sensitisation was reviewed. The reactive constituents of base resin, curing agents, diluents, etc. were all found to be responsible for skin sensitisation to epoxy resins used in the construction industry. The review also considered the current usage of epoxy resins and the reported occurrence of epoxy dermatitis. A number of protective measures, including the use of protective clothing, alternative materials, mixing and dispensing procedures and safe handling methods have been recommended in the report from this work, to be published in HSE's Research Report series.

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□ AUTOMATIC DATA CAPTURE OPPORTUNITIES FOR HEALTH AND SAFETY IN INDUSTRY

(Contractor: Dr Carol Daniel)

Most people will be familiar with simple tracking and identification technologies, like the disc-shaped devices that have been clamped on clothing in department stores for years to deter shoplifting. However, as these devices have become smaller, smarter, more durable and cheaper, object-to-object communication has become practical for many more applications, including several that would benefit health and safety. These include: authorisation of personnel access to plant and machinery; effective maintenance and repair of equipment with an audit trail; use of safety equipment before commencing work; and verification of correct shut down procedure for plant and machinery.

However, although some industries have seen the benefit of using such technologies in their operations, many others do not understand the technology or its implications for their business. The main objective of this project was to raise awareness and encourage the application of automatic data capture technologies for improving health and safety in industry. The project concluded with a seminar at the Frontline Solutions Europe exhibition & conference at the NEC in October 2002. The report from this work will be published in HSE's Research Report series.

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□ EVALUATION OF THE HEALTH AND SAFETY (FIRST AID) REGULATIONS 1981, THE APPROVED CODE OF PRACTICE AND GUIDANCE

(Contractor: Cassella Winton)

The Health and Safety (First Aid) Regulations 1981 have been in force for 20 years and have served UK industry well, setting a basic standard for the provision of first aid in the workplace from which many have benefited. The profile of UK industry is very different in 2002 compared with 1982. The core of this project was a questionnaire survey to representative employers and others with a direct interest in First Aid provision in the workplace. This was used to obtain basic information regarding employers' awareness, level of application and other views regarding the regulations.

Interviews were subsequently conducted with selected employers and others to obtain detailed views and opinions. The survey established that first aid awareness and penetration in workplaces was good, with the principle objectives of the regulations having very wide appeal. Compliance was found to be in spirit rather than to the letter of the regulations and this exposed some important deficiencies in the format and content of guidance and in the proportionality of the current regulatory requirements for low risk employees. The report from the work, to be published in HSE's Research report series, makes recommendations for development of the regulations and guidance and for the frequency and length of First Aid training.

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□ PROJECT LISTING

NEWLY COMMISSIONED PROJECTS: OCTOBER - DECEMBER 2002		
Project No.	Project Title	Project Officer
Block 1 - Priority Programmes		
R32.098	Structural deterioration of tractor cabs with age	Mr D Butter. Tel: 01159 712800 david.butter@hse.gsi.gov.uk Ms N Quarterman. Tel: 020 77176979 nicki.quarterman@hse.gsi.gov.uk
R54.088	Research study to evaluate different management strategies for post traumatic stress disorder	
Block 2 - Work in the Major Hazards Industries		
R04.089	Generic model and code for the assessment and design of directed water deluge systems for the protection of pressure vessels	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
R05.110	Fire explosion accident rates for ammonium nitrate stores	Dr R Merrifield. Tel: 0151 951 4804 roy.merrifield@hse.gsi.gov.uk
R32.099	Safety implications of European risk based inspection and maintenance methodology	Ms P Stenhouse. Tel: 0151 951 3888 pauline.stenhouse@hse.gsi.gov.uk
R33.109	Information cuttings: Condition, appraisal and remedial action	Mr G Kerr. Tel: 0141 275 3000 gerald.kerr@hse.gsi.gov.uk
R67.159	Investigating influences on safety climate in Train Operating Companies (TOC)	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
R72.080	Simulation of complete and partial gasholder seal failures	Dr S Welsh. Tel: 0151 951 4784 shaun.welsh@hse.gsi.gov.uk
R72.081	Simulation of complete and partial gasholder seal failures using Advantica's proprietary software together with preparation and publication	Dr S Welsh. Tel: 0151 951 4784 shaun.welsh@hse.gsi.gov.uk
R72.082	Extension of the computer program MISHAP to deal with multi-segment pipelines	Mr I Hirst. Tel: 0151 951 3526 ian.hirst@hse.gsi.gov.uk
R75.058	Bund wall overtopping and dynamic pressures	Mr I Hirst. Tel: 0151 951 3526 ian.hirst@hse.gsi.gov.uk
4000	Explosion resistance of floating offshore installations – sensitivity analysis	Mr M Nunn. Tel: 01224 252500 marc.nunn@hse.gsi.gov.uk
4025	Seismic assessments of North Sea Platforms	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
4033	Analysis of risk estimate data	Mr R Miles. Tel: 020 7717 6685 bob.miles@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
4038	Review of external stress corrosion cracking of 22%Cr duplex stainless steel. Phase 1 – Operational data acquisition	Mr C Robbins. Tel: 01224 252500 chris.robbins@hse.gsi.gov.uk
4042	Lifting incident review 1998 to 2002	Ms P Stenhouse. Tel: 0151 951 3888 pauline.stenhouse@hse.gsi.gov.uk
Block 3 - Compliance		
R42.115	An inventory of fibres to classify their potential hazard and risk	Mr A Griffin. Tel: 0151 951 4674 adrian.griffin@hse.gsi.gov.uk
V47.009	Central Index of Dose Information	Mr S Walker. Tel: 0151 951 4723 steve.td.walker@hse.gsi.gov.uk
Block 4 - Mandatory Activities		
R45.079	Use of temporary shifts in vibrotactile and thermal sensitivity as indicators of the significance of hand arm vibration exposures	Mr C Nelson. Tel: 0151 951 4826 chris.nelson@hse.gsi.gov.uk
R68.080	The provision of health and safety information through company accounts, annual reports and other publicly available documents	Ms D Spooner. Tel: 020 7717 6664 debbie.spooner@hse.gsi.gov.uk
R68.083	The relationship between the Railways Industry and HSE	Mr R Olsen. Tel: 020 7717 6243 rob.olsen@hse.gsi.gov.uk

□ PROJECT LISTING

RECENTLY COMPLETED PROJECTS: OCTOBER - DECEMBER 2002		
Project No.	Project Title	Project Officer
Block 1 - Priority Programmes		
R33.063	Load tests on full scale scaffold	Mr A Maitra. Tel: 0151 951 4634 hash.maitra@hse.gsi.gov.uk
R51.185	A study of the use of epoxy resins in the construction industry	Mr P Evans. Tel: 0151 951 3281 paul.evans@hse.gsi.gov.uk
R55.066	Tree harvesters – Operator musculoskeletal disorders	Mr N Craig. Tel: 02476 696518 neil.craig@hse.gsi.gov.uk
R55.072	Health and safety of non-keyboard input devices	Mr T Shaw. Tel: 0151 951 4552 trevor.shaw@hse.gsi.gov.uk
Block 2 - Work in the Major Hazards Industries		
R03.029	Measurement of flame speeds in dust explosions	Mr A Tyldesley. Tel: 0151 951 4769 alan.tyldesley@hse.gsi.gov.uk
R03.033	Dust explosion risks from flexible intermediate bulk containers	Mr A Tyldesley. Tel: 0151 951 4769 alan.tyldesley@hse.gsi.gov.uk
R05.091	Hazard assessment of highly reactive systems - HarsNet	Ms J Etchells. Tel: 0151 951 4764 janet.etchells@hse.gsi.gov.uk
R42.111	Scaling of aerosol apparatus – Part 2	Mr B Leeming. Tel: 0114 291 2300 bob.leeming@hse.gsi.gov.uk
R43.079	CFD modelling of gas flows in coal mine goafs	Mr S Wing. Tel: 0114 291 2300 steve.wing@hse.gsi.gov.uk
R51.239	New requirements for the transport of dangerous goods by rail	Mr E Bailey. Tel: 020 7717 6218 eddie.bailey@hse.gsi.gov.uk
R75.042	Research to improve guidance on separation distances for the multi-energy method (RIGOS)	Mr M Goose. Tel: 0151 951 4012 martin.goose@hse.gsi.gov.uk
3561	Dynamic loading on galvanised wire rope	Mr J MacFarlane. Tel: 01224 252500 jim.macfarlane@hse.gsi.gov.uk
3562	Size criteria for galvanised wire rope	Mr J MacFarlane. Tel: 01224 252500 jim.macfarlane@hse.gsi.gov.uk
3746	Axial fatigue tests on offshore container slings and chains	Mr J MacFarlane. Tel: 01224 252500 jim.macfarlane@hse.gsi.gov.uk
3768	Performance of diving apparatus	Mr D Tee. Tel: 020 7717 6923 dave.tee@hse.gsi.gov.uk
3783	Cyclic loading experiments – Tension group tests in clay	Mr R Martland. Tel: 0151 951 3082 roland.martland@hse.gsi.gov.uk
3845	Determination of airflow characteristics of temporary refuges on offshore installations	Mr S Connolly. Tel: 0151 951 3144 stephen.connolly@hse.gsi.gov.uk
3846	Identification of stagnant areas in naturally ventilated offshore modules	Mr S Connolly. Tel: 0151 951 3144 stephen.connolly@hse.gsi.gov.uk
3896	Local response of concrete shafts/caissons of offshore platforms: Strain rates effects	Mr V Karthigeyan. Tel: 020 7717 6773 v.karthigeyan@hse.gsi.gov.uk
3910	Evaluation of non-destructive testing instruments for use on steel ropes	Mr P Dua. Tel: 020 7717 6736 prem.dua@hse.gsi.gov.uk
3933	Validation of a human factors accident investigation tool: Comparison between lagging and leading safety performance indicators	Mr B Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3943	Use of information communication technology to automate access to HSE's Safety Information Definition Study	Mr B Miles. Tel: 020 7717 6685 bob.miles@hse.gsi.gov.uk
3995	Crane sling shedding study	Mr J MacFarlane. Tel: 01224 252500 jim.macfarlane@hse.gsi.gov.uk
4001	Impact of changes to SNAME T&R 5-5A on jackup system reliability levels	Mr W Jones. Tel: 020 7717 6796 wayne.jones@hse.gsi.gov.uk
4010	Cost effective structural monitoring	Mr M Birkinshaw. Tel: 020 7717 6775 malcolm.birkinshaw@hse.gsi.gov.uk
Block 3 - Compliance		
R03.034	Measurement of limiting oxygen concentration in sewage sludge drying plants	Mr A Tyldesley. Tel: 0151 951 4769 alan.tyldesley@hse.gsi.gov.uk
R32.074	Recommended practice for non-invasive inspections. Group sponsored project 235	Mr H Bainbridge. Tel: 0151 951 4651 harry.bainbridge@hse.gsi.gov.uk
R52.139	Exposure of abattoir workers to contaminants: EUCNSRISK	Mr B Coggans. Tel: 0141 275 3000 brian.coggans@hse.gsi.gov.uk

□ PROJECT LISTING

RECENTLY COMPLETED PROJECTS: OCTOBER - DECEMBER 2002		
Project No.	Project Title	Project Officer
Block 3 - Compliance (Cont.)		
R52.143	Bioaerosol risk in waste composting sites	Mr T Hay. Tel: 02920 263000 trevor.hay@hse.gsi.gov.uk
R64.081	Investigating incidents – A model approach	Ms K Clayton. Tel: 0151 951 4317 karen.clayton@hse.gsi.gov.uk
R67.011	Safety culture module for Field Operations Directorate Guide	Mr N Rothwell. Tel: 0151 951 4436 neil.rothwell@hse.gsi.gov.uk
R75.029	Dispersion/anhydrous hydrogen fluoride in humid atmospheres	Dr S Porter. Tel: 0151 951 4626 steve.porter@hse.gsi.gov.uk
Block 4 - Mandatory Activities		
R32.075	Safety of rollcages	Mr N Hammond. Tel: 020 7717 6287 nigel.hammond@hse.gsi.gov.uk
R36.080	Isolation and autobalancing techniques for portable machines	Mr C Nelson. Tel: 0151 951 4826 chris.nelson@hse.gsi.gov.uk
R41.126	Analysis of the 1991 National Combustion Performance Survey results	Mr A Jones. Tel: 0151 951 3273 allyn.jones@hse.gsi.gov.uk
R46.084	The application of data capture technologies	Dr J McGuinness. Tel: 020 7717 6414 john.mcguinness@hse.gsi.gov.uk
R51.177	In vitro dermal absorption of vapours	Mrs E Ball. Tel: 0151 951 3400 elanor.ball@hse.gsi.gov.uk
R58.060	Evaluation of Health and Safety (First Aid) Regulations, AcoP and Guidance	Mr A Steele. Tel: 020 7717 6688 alastair.steele@hse.gsi.gov.uk
R63.060	Analysis of compensation claims related to health and safety issues	Mr S Vinton. Tel: 020 7717 6954 steve.vinton@hse.gsi.gov.uk
R64.087	The development of messages for the promotion of COSHH Essentials to small and medium enterprises	Ms C Sullivan. Tel: 020 7717 6341 carole.sullivan@hse.gsi.gov.uk
R67.151	Development of human factors methods and associated standards for inspectors	Dr D Lucas. Tel: 0151 951 4363 debbie.lucas@hse.gsi.gov.uk
R68.068	A study of HSE's openness procedures and practices	Mr A Callegari. Tel: 020 7717 6422 alex.callegari@hse.gsi.gov.uk

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RR33	Evaluation report on OTO 1999/092 'Human factors assessment of safety critical tasks'
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RR35	Taking account of societal concerns about risk: Framing the problem
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RR41	Analysis of impact of proposed changes to separation distances for mode A registered premises holding HT4 fireworks
RR42	Evaluating the effectiveness of the HSE's health and safety climate survey tool
RR45	Ergonomics of using a mouse or other non-keyboard input device
RR46	Measuring HSE FOD inspection effectiveness
RR50	Main changes between 2001 and 2003 editions of the regulations concerning the International Carriage of Dangerous Goods by Rail (RID)
RR51	PTO shaft guards: development of strength tests for tractor/machine interface standards
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