# smiths

## Smiths Group plc Environment, Health and Safety Report 2005

Summary report on progress, case studies and data 2005

# 05

Smiths has made good progress in its EHS programmes during 2005. We are on track to meet, or have already exceeded, our targeted reductions in site energy and water use, waste disposal, solvent emissions and work-related accidents/ill-health.

#### Environment, Health and Safety Report 2005

14% reduction in the number

of accidents resulting in lost time

per 200,000 man hours worked

14%

2005 highlights

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## **Global manufacturing**

# 2004-2005.

Reduced our 'carbon footprint' by 24,300 tonnes by transitioning our UK electricity supply contract to 100% renewable generation.

111 major sites (96 in 2004) completed at least one comprehensive health and safety audit (average score increased

from 64% in 2004 to 69% in 2005).

### Smiths Group operates 104 manufacturing sites in 20 countries around the world.



# \$0.8m

Delivered savings of \$0.8 million in Workers' Compensation costs in the USA through accident reduction programmes.

# £6.7m

Delivered estimated costs savings of £6.7 million through our environmental programmes.

11%

Water use decreased by 11% per £ million sales 2004-2005.

About this report	This report summarises Smiths' environment, health and safety (EHS) activities and performance in the year to 31 July 2005.
About Smiths	– A global engineering business.

A global engineering business.

- Listed on the London Stock Exchange.
- Over 30,000 employees in 40+ countries.
- £3 billion sales in fiscal year 2005.

## Our businesses

#### Aerospace

Aerospace Systems designs and manufactures digital, electrical and mechanical systems for military and commercial aircraft. Smiths Aerospace Components supplies high-value components

www.smiths-aerospace.com

### Detection

Smiths Detection designs and manufactures equipment to detect and to identify:

- Explosives.
- Weapons.
- Dangerous substances.

Our customers are airport, transportation and customs authorities, emergency services, civic authorities and defence departments.

www.smiths-detection.com

# smiths

#### Medical

Smiths Medical is a supplier of specialist medical devices to global markets. Smiths Medical comprises three product groupings:

- Safety Devices.
- Critical Care.
- Medication Delivery and Patient Monitoring.

www.smiths-medical.com

### Specialty Engineering

The Specialty Engineering division comprises four businesses:

- 1 John Crane provides mechanical rotating seals used in process plants.
- 2 Interconnect supplies components and sub-systems for connecting, protecting and controlling critical electronic and radio frequency systems.
- 3 Flex-Tek provides ducting and hosing for a wide range of applications, mainly for heating and ventilation and domestic equipment.
- 4 Marine Systems supplies marine electronics and charts.

www.smiths-specialtyengineering.com

## Find out more

For more detailed information on the material presented in this summary report (referenced against the Global Reporting Initiative framework), please see our online report at: www.smiths-group.com/responsibility

#### Making contact

Smiths welcomes feedback on this report, either online through the EHS website or by sending your comments to the EHS Director at: ehs@smiths-group.com

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## Message from the Chief Executive

Keith Butler-Wheelhouse

February 2006

Welcome to Smiths' Environment, Health and Safety (EHS) summary report for 2005. Smiths has had a good year both financially and in the progress made in its EHS programmes.

We have shown improvement in each of our key performance indicators since last year's report. Smiths is on track to meet, or has already exceeded, its 2007 EHS targets. During 2006, we will review our progress with a view to ensuring continual improvement.

This report provides a snapshot of Smiths' approach to managing the EHS aspects of its operations. EHS forms an important part of our Code of Corporate Responsibility and Business Ethics. I believe that good EHS performance is part of good business in terms of reducing risk, delivering cost savings through the setting and achievement of improvement targets and providing more sustainable products with lower environmental impacts. Our performance will be of interest to our employees, investors, customers, regulators, rating agencies and other opinion formers.

Smiths has reduced its environmental impacts per sales output in terms of energy and water use, waste disposal to landfill and solvent emissions. Our accident rates are also significantly down over the year, continuing the downward trend since 2001. For the first time, our accident reduction efforts and management focus have delivered real reductions in our Workers' Compensation costs in the USA.

With increasing attention being paid to climate change, I am pleased to report that our carbon footprint has also been reduced through purchasing electricity for our UK operations that is generated from 100% renewable sources (see page 5).

In addition to providing an update on our key EHS performance indicators, this report gives an insight into some of the successes and achievements made by Smiths' businesses in practice through a number of case studies:

- Designing new medical products with reduced environmental impacts (page 8).
- Reducing manual handling injuries at our John Crane business in the USA (page 10).
- Sharing environmental best practice with our UK aerospace suppliers (page 8).

Smiths' EHS strategy has a clear focus – one based on performance improvement through eco-efficient operations, accident reduction in the workplace and the development of more sustainable products. Looking forward, we will continue to give EHS issues a high priority in the way we do business and will continue to focus our efforts in these areas. We will also ensure that ISO 14001 and our health and safety audit tool are adopted by our new acquisitions.

Whilst 2005 has been a good year for our EHS programmes, we are not complacent and will continue to work hard to build on the gains we have made this past year in the spirit of continual improvement.

We value your feedback and I encourage you to contact us to share with us your views on the report (see page 1 to contact us directly or, if you are viewing this online, go to the Feedback Now link provided on the back cover).

#### Environment index

Progress has been recognised externally through the annual Environment Index survey in the UK (the BiE survey). In the 2004 survey published in April 2005, Smiths was ranked 48th out of 168 participants, up from 118th in 2003.

## Performance summary

Performance area	Units	2001	2002	2003	(re-state 2004	ed) 2005	Trend 04-05
Site energy use	MWh/£ million sales	215	225	195	189	179	•
Water use	M <sup>3</sup> /£ million sales	544	608	550	468	418	•
Waste disposal to landfill	Tonnes/£ million sales	7.3	6.0	3.9	3.7	3.3	•
Greenhouse gas emissions	Tonnes CO <sub>2</sub> equivalent/£ million sales	80.3	81.5	76.7	74.1	63.2	•
VOC emissions	Kg/£ million sales	117	134	118	119	102	•
Health and safety	No. of lost time incidents due to injury or illness/ 200,000 man hours	1.76	1.57	1.34	1.25	1.07	•
Enforcement action	Environment (No. fines or prosecutions)	Not available	2	1	2	0	•
	Health and safety (No. fines or prosecutions)	Not available	Not available	Not available	3	2	•
Environment Index (BiE) Rating	% score	56	64	69	76	89	•

Key: • Improvement • No Change • Deterioration

Note: Trend analysis is only shown for 2004–2005 as these data are considered to be more robust than in previous years. 2004 data has been re-stated following adjustments made at nine Smiths sites.

## Our approach

## Smiths is committed to managing the EHS aspects of its global operations in a responsible manner.

#### Policies, strategy and targets

EHS forms an important part of our Code of Corporate Responsibility and Business Ethics (www.smiths-group.com/corporateresponsibilitybusinessethics.htm). Group policy statements for EHS have been in place for a number of years and apply to our operations worldwide.

Smiths' EHS strategy has a clear focus – one based on performance improvement through eco-efficient operations (with reductions in site energy and water use, waste disposal and solvent emissions normalised against sales), accident reduction in the workplace and the development of more sustainable products. Details of our progress against our 2007 EHS targets are provided on pages 4 to 7. There is an on-going dialogue with our key stakeholders on EHS issues, including our employees, investors, customers, government and regulators.

#### Organisation and structure

Smiths has a clearly defined management structure for EHS to ensure that Group policies and standards are adopted worldwide. Day-to-day responsibility and accountability for EHS management rests with the local management of our operating companies. Progress against targets and other EHS programmes is reviewed by the Group EHS Committee and regular updates are provided to the Smiths Group Board. The Chief Executive continues to have overall responsibility for EHS performance.

#### EHS organisation chart



Environment, Health and Safety Advisers
(Site Level)

## Report scope

In 2005, all our 109 manufacturing sites and larger service centres reported environmental performance data (104 in 2004). Eleven new manufacturing sites reported in 2005. We also collected health and safety data from all the locations providing environmental data plus all manufacturing sites that have not yet completed a full financial year in the Group (except Medex), all remaining product repair and warehouse facilities regardless of size, as well as standalone office locations employing 30 or more people – 228 sites in total (220 in 2004). Environmental data covers 80% of our people and health and safety data covers 88%.

For more information on our approach to managing EHS, our strategy, policies, ISO 14001 certification programme and details of our global best practice safety manual and audit tool, please visit our website www.smiths-group.com/responsibility.

#### Management systems

Systems are in place for the management of EHS risks and opportunities across Smiths' major operations worldwide. 83 sites, of which 80 are major manufacturing sites, in 16 countries are certified to the international environmental management systems standard, ISO 14001. Comprehensive arrangements for health and safety management are defined in our global best practice safety manual that focuses on the management and control of 60 common hazards across Smiths' operations. Compliance with these guidelines is assessed annually at major operations using an internal self-assessment audit tool called AuditMaster<sup>™</sup>. Smiths will continue to apply this audit tool and ISO 14001 across its new acquisitions.

## Our performance at a glance

These charts show trends in the key performance indicators covering our global operations during the period 2001–2005 and set out our progress against our targets towards 2007.

Over the past five years, Smiths has improved EHS performance across all seven of its key indicators. We are on track to meet, or have already exceeded, our 2007 EHS targets for site energy and water use, waste disposal to landfill, solvent emissions (Volatile Organic Compounds) and accident reduction.

We have chosen to report on these areas of performance as they represent our greatest impacts and are common across our operations as an engineering group. During 2006, we will review our progress with a view to ensuring continual improvement.

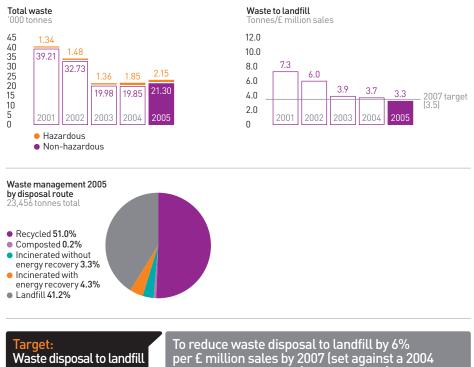
## Waste management

Smiths' hazardous waste arisings increased by 300 tonnes in 2005, due mainly to changes in EU legislation designating additional wastes as hazardous.

Note

## Cost savings through waste minimisation

Minimising waste at source, thus saving on raw materials, packaging and consumables, combined with income from waste recycling and reduced waste disposal costs saved Smiths an estimated £6.7 million in 2005.



baseline of 3.7 tonnes/£ million sales).

2005 Progress: Achieved. 11% reduction to 3.3 tonnes/£ million sales.

New target: Continual improvement.



## Climate change

**Reducing our carbon footprint through renewable energy** In the UK, Smiths' manufacturing operations have transitioned from contracting for electrical power that depended on fossil fuel sources for its generation to a contract for electrical power generated entirely from clean and green renewable sources (wind, hydro and biomass fuels). Our new electricity supply contract with E.ON Energy saved 24,300 tonnes of CO<sub>2</sub> that would otherwise have been emitted to atmosphere, reducing Smiths' overall carbon footprint from site energy use by 11% during 2004–2005.



Notes

 Greenhouse gas emissions from Smiths' global manufacturing operations exclude emissions associated with product transport, employee commuting and business travel.

– Emissions cover Smiths' use of site energy, process emissions ( $CO_2$  and  $SF_6$ ) and leakage of HFCs from air conditioning, fire protection and refrigeration systems.

## Water use

**Energy use** 

#### Environment, Health and Safety Report 2005

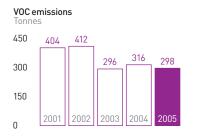


To reduce site energy consumption by 5% per £ million sales by 2007 (set against a 2004 baseline of 189 MWh/£ million sales).

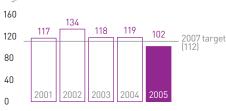
2005 Progress: Target achieved, with a 5% reduction to 179 MWh/£ million sales.

New target: Continual improvement.

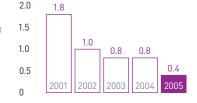
## **Air emissions**



#### VOC emissions million sales Ka/£



Total emissions of ozone depleting substances Tonnes CFC-11 equivale



Target: Solvent emissions

# To reduce solvent (VOC) emissions by 6% per £ million sales by 2007 (set against a 2004 baseline of 119 kg/£ million sales).

2005 Progress: Achieved. 14% reduction to 102 kg/£ million sales.

New target: Continual improvement.

#### Note

Like many companies, Smiths uses small quantities of ozone depleting substances in its operations. Typical applications include air conditioning, environmental test chambers, process cooling and precision cleaning.

## Enforcement action

Two enforcement actions occurred for health and safety violations in 2005, both in the USA, totalling \$53,440 in fines (three fines in 2004 totalling \$22,000). Both violations were corrected and no further enforcement action has taken place.

No environmental enforcement actions resulted in fines in 2005 (two in 2004 with fines totalling \$17,300) continuing Smiths' trend of low levels of enforcement action.

## Health and safety

Smiths Group accident claims by type (%) Source: workers' compensation data in the USA for year ending 31 July 2005

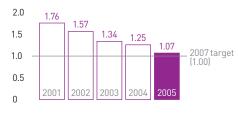
- , ,
- Manual handling 27%
   Chruck but/secient 24 %
- Struck by/against 24 %
- Slips, trips and falls 13%
  Hand tools (manual and powered) 10%
- Hand tools (n
   RSI 7%
- KSI 7%
  Miscellaneous/other 6%
- Occupational diseases or injuries 5%
- Machine injuries 3%
- Machine injuries
   Eye injuries 2%
- Cuts/punctures 2%
- Burns 1%

Notes:

- As over half of Smiths' employees are based in the USA, data for workers' compensation claims provides a good indication of accident causes across the Group as whole.
- Manual handling (lifting, carrying and lowering) remains the single largest cause of claims at 27% (30% in 2004), followed by struck by/against at 24% and slips, trips and falls at 13%.

- Claims following machinery injuries remain relatively low at 3%.

#### Number of lost time incidents per 200,000 hours worked Equivalent to 100 employees



To reduce the number of accidents resulting in days away from work (lost time case incidence rate) by 20% by 2007, set against a 2004 baseline of 1.25.

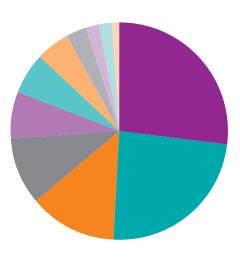
2005 Progress: On-track. 14% reduction achieved at 1.07 lost time cases/200,000 hours worked.

### **Further information**

Accident reduction

arget:

Further information and commentary on our performance, including details on the management of contaminated sites, EHS in due diligence, spills and investments in environmental programmes is provided online www.smiths-group.com/responsibility



EHS case studies	Case studies offer a useful window on how Smiths is addressing EHS issues. The following section looks at three examples: design of products to reduce environmental impact over the life cycle of the product (eco-design); accident reduction by focusing on manual handling injuries; and sharing environmental best practice with our suppliers.			
Developing more sustainable products	Smiths completed its second eco-design demonstrator project in 2005. Designers from Smiths Medical businesses participated in a structured programme of eco-design training, group exercises, product disassembly sessions and sharing of experiences. The life cycle impacts of new or prototype products were examined in terms of the materials used, manufacturing techniques employed to assemble the product, packaging, environmental impacts during the use phase and end-of-life disposal (including ease of disassembly for recovery and recycling). The eco-design techniques used during the project were put to good use in identifying practical design changes. Two further case studies (see pages 9 and 10) for the new Equator Convective Warmer and EnviroPure/EnviroGuard have been generated from this project to add to the four created in 2004. Eco-design will help Smiths to reduce its compliance costs under WEEE/RoHS (see Hazardous materials management) and identify further cost savings through environmental life cycle thinking applied to new product development.	<ul> <li>Hazardous materials management Smiths continues to make preparations for the introduction of European product based legislation which will require some action in respect of our medical devices and some of our detection and interconnect products:</li> <li>Waste Electrical and Electronic Equipment (WEEE) Directive.</li> <li>Restriction of Hazardous Substances (RoHS) Directive.</li> <li>Work also continues to phase out the use of hazardous materials in aerospace applications such as the Boeing 787 and Airbus A380. Further details on hazardous materials management and the impact of WEEE/RoHS is provided at www.smiths-group.com/responsibility.</li> </ul>		
Accident reduction	Smiths' US Workers Compensation Committee has focused its efforts on areas of highest injury occurrence and corresponding compensation costs. These efforts, together with those of the people working in our businesses, are now beginning to reduce these rates and costs.	Workers Compensation payments were reduced by \$0.8 million in 2005 compared to 2004, as a direct result of our accident reduction efforts, reducing the number of work-related injuries and illnesses that subsequently become claims. The John Crane case study (page 11) illustrates what has been achieved at a site level by focusing on manual handling injuries.		
Supply chain partnership	Smiths is reviewing approaches for the effective management of supply chain EHS risks and opportunities. Our approaches have traditionally focused on the use of supplier risk assessments,	questionnaires and audits but in 2005 Smiths Aerospace completed a new partnership project with its UK suppliers aimed at sharing environmental best practice.		
	Smiths Aerospace supply chain project shares best practice Smiths Aerospace completed a major supply chain project in 2005 which focused on its UK suppliers with significant environmental impacts and scope for improved performance such as metal finishing, electronic components, printed circuit boards and packaging. Smiths and its partners (Business Link, Envirowise/Action Energy and the University of Gloucestershire) provided practical training and networking sessions to share ideas and experiences, establish baseline performance and data to help track progress, completed site support visits and developed action plans. The project was successful in helping to transfer knowledge and experience of environmental management to Smiths' suppliers on topics such as pollution prevention, eco-design, legal compliance and cost reductions through reduced environmental impacts such as energy conservation and packaging minimisation.	For example, through their participation in the project, Nu-Pro (Smiths' supplier of plating and coating processes for fuel probes) reduced costs associated with its use of dye penetrant for non- destructive testing by 75% through an improved filter cleaning regime. Support through Action Energy helped contribute to a 14% reduction in site energy use. Improved waste segregation practices and recycling reduced waste disposal to landfill by 10 tonnes per annum. Smiths Aerospace is now examining how best to transfer its environmental experiences to its suppliers in continental Europe and the USA. Further details of this project can be found in case studies sponsored by the UK confederation of British Industry (CBI) www.article13.com/static/A13_rp_CBIStudy Page.asp		



## Case study Equator eco-design

Smiths' Equator convective warmer provides patient temperature control during surgery to facilitate post-operative recovery. Life cycle thinking at the design stage has produced a number of environmental and financial benefits:

- Cost savings of \$136 per unit (re-designed injected moulded plenum).
- 13% reduction in weight (lightweight motor).
- Greater use of snap fits to reduce use of screws (ease of assembly and disassembly).
- Environmentally friendly (recyclable) packaging.



## Case study EnviroPure and EnviroGuard eco-design

EnviroPure/EnviroGuard is a 'scavenging' system designed to control healthcare workers' exposure to waste anaesthesia gases in operating theatres, laboratories and research centres. Eco-design has delivered the following benefits:

- -40% reduction in screws and metal inserts.
- High efficiency power supply reduces energy consumption to <0.25 watts.</li>
- Easier disassembly for end-of-life recycling.

## Further information

Further details of these and other eco-design case studies can be downloaded from www.smiths-group.com/responsibility







## Case study John Crane Inc reduces manual handling injuries



John Crane at Morton Grove in Illinois, USA, completed an analysis of its accident rates and identified manual handling as the single largest cause of work-related injuries and compensation costs.

An ergonomics improvement team was established and a structured programme of quantitative risk assessment and training (including the use of videoing techniques) was deployed to analyse the workstations and activities of highest risk. Additional mechanical handling aids such as lifting equipment were provided and staff awareness improved through safety meetings and 'Tool-Box' talks. A 'Caution Heavy Lift' labelling programme for raw materials loads weighing greater than 35lbs (15.9kg) was also used to promote the use of mechanical handling aids versus manual lifts. During the first year of the programme, these actions reduced the risk rating scores by 35%, reduced workers' compensation costs by over 70% (2003–2004 versus 2004–2005) due to fewer manual handling injuries and contributed to an overall reduction in the lost time case incidence rate by over 50% to 0.56 in 2005 (1.26 in 2004).

## Independent assurance statement



## Independent assurance of our EHS reports has been undertaken by csrnetwork for the last three years.

#### Scope and objectives

Smiths Group commissioned csrnetwork to provide independent assurance on the environment health and safety (EHS) information and data within the Smiths Group Environment Health and Safety Report 2005 (the Report). Any financial performance information contained within the Report is excluded from the scope of this assurance process. The objectives were to check claims and review the arrangements for the management of EHS issues and the systems for collection of data. We were also asked to comment on the completeness and accuracy of the reporting and on the Smiths Group EHS management programme. csrnetwork took account of the principles underlying the AA1000 Assurance Standard in designing the assurance process. Our work included review of the data and claims, interviews with senior management and we visited six sites in the UK and the USA to test policy implementation, claims and data systems. These visits bring the total number of sites we have visited over the past three years to 17, totalling 60% of Group sales, 35% of Group employees, between 44% and 56% of the Group's environmental footprint<sup>1</sup> and 36% of total absences through work-related injuries/Illnesses, based on 2005 data. Details of the responsibilities of the management of Smiths Group and the assurance providers, and the method used for this independent assurance work can be found in an extended version of this statement at the Assurance section of the Smiths Group website www.smiths-group.com/responsibility.

#### Opinion

#### Accuracy

On the basis of the method and scope of work undertaken and the information provided to us by Smiths Group, we have found that overall the Report presents an accurate description of the company's performance. Nothing came to our attention to suggest any systematic issues with data collection that could result in material mis-statement of performance data or claims on a consolidated basis. At the sites visited, there were several data sets that were found to require minor amendments, based on a review of the supporting evidence. These instances were commonly related to transcription errors and a lack of checking processes. Sites should be further encouraged to integrate data quality control processes into existing management arrangements. Overall however, the Group level EHS data collection system provides a robust framework for data submission from sites, and includes useful validation processes to identify potential errors.

#### Completeness

No material issues appear to have been omitted from the scope of the Report, and appropriate systems are in place for monitoring and gathering information on relevant EHS management arrangements and performance. This is the first year where accident reduction efforts have been shown (in the Report) to have delivered real financial benefit through reduction of USA workers' compensation costs. This achievement is due to an increased focus by Smiths' management on the root causes of accidents and has resulted in significant progress towards the Group health and safety performance target. This year's report also includes commentary on the environmental and social benefits of new product life cycle analyses; and progress made in supply chain management over the last 12 months. Additional eco-design project opportunities should now be identified across the Group.

#### Recommendations for the Smiths Group

EHS management programme and reporting Performance data reviewed by the EHS Committee is now being shared with divisional management teams to build ownership. The approach adopted within Smiths Medical of regular liaison on EHS performance between local EHS co-ordinators, divisional EHS management and divisional boards is particularly commendable.

Smiths Group adopts a risk based approach to managing significant EHS aspects of operations across its sites, with implementation and use of the ISO 14001 management system (for environmental management) and the AuditMaster™ tool (for health and safety management) used by the Group, in addition to performance data, as indicators of sites' control of EHS risks. With the network of regional EHS co-ordinators, local safety advisers and local environmental co-ordinators now in place, we recommend that an internal cross-site EHS auditing programme is set up within each division to increase the sharing of EHS practice in the identification and management of EHS risks.

Three of the five Group EHS targets were met this year (site energy reduction, waste to landfill and VOC emissions) and two are 'on track' (lost time accidents and water use). As the target deadlines are not until 2007, this progress is encouraging. Sites now need to work towards the remaining two targets and continue driving improvement in the others. We recommend that the Group EHS targets be reviewed next year after a second year's analysis of progress.

csr network ltd UK January 2006

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ald have

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## Online links and publications:

## 2003 online EHS report www.smiths-group.com/ehs/ehs2003

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