

# Operating and Financial Review

Neil Carson Chief Executive



## Strategy and Objectives

Johnson Matthey's strategic intent is to achieve consistent growth in earnings by concentrating on the development of high added value products and services in areas where our expertise provides a competitive edge, particularly in catalysis, precious metals, fine chemicals and materials technology.

### The group's financial objectives are:

- To achieve consistent and above average growth in earnings per share. Over the last ten years Johnson Matthey has increased its earnings per share before exceptional items and goodwill amortisation at a compound annual growth rate of 8.4% p.a. (see pages 86 and 87).
- To grow dividends in line with earnings while maintaining dividend cover at about two and a half times to ensure sufficient funds are retained to support organic growth. Over the last ten years Johnson Matthey has increased its dividend at a compound annual growth rate of 7.5% p.a. Dividend cover for 2004/05 was 2.4 times (see page 19).
- To deliver a return on investment above the group's cost of capital. We estimate Johnson Matthey's post tax cost of capital is currently about 8%. The group's post tax return on assets for 2004/05 was 3.4% above that at 11.4%.
- We set a pre-tax target of 20% for return on assets for all of our divisions with a minimum threshold of being ahead of our cost of capital (11.3% on a pre-tax basis). Precious Metal Products achieved a return in excess of 20% in 2004/05. Each of the other divisions' return on assets was between the cost of capital and the 20% target (see page 18). In 2004/05 the group's overall pre-tax return was 16.1%.

### The board's strategies to achieve these financial objectives are:

- Focus the business on the group's core skills in catalysis, precious metals and fine chemicals.
- Position the group in growth markets where our core skills are applicable. Catalysis is a key technology in many developing markets for the 21st century, particularly those concerned with protecting the environment such as in emission control, cleaner fuel and the hydrogen economy. Catalysis is also important in the manufacture of active pharmaceutical ingredients where Johnson Matthey has a strong niche position in the growing markets for generic pain killers and other controlled drugs, as well as platinum based anticancer compounds. Johnson Matthey's expertise and international strength in precious metals, particularly platinum group metals, was the starting point for many of our businesses. The market for platinum has grown steadily for many decades and demand is expected to grow significantly over the next ten years.
- Differentiate ourselves by using our world class technology. We will continue to invest significantly in research and development to develop new products and manufacturing processes. Technology is the key driver for most of our businesses and Johnson Matthey has a strong science base with technical centres located in all our major markets.
- Maintain strong relationships with our major customers, suppliers, government bodies and other stakeholders by investing resources on joint projects to ensure the group is well positioned for future market development.
- Continue to invest in Johnson Matthey's employees to ensure they are well trained, motivated and encouraged to meet the challenges of the future.

In the near term our main focus will be to deliver the major organic growth opportunities we have been investing in over the last few years. These include emission controls for new heavy duty diesel (HDD) vehicles (trucks and buses); further opportunities in light duty diesel vehicles including catalysed soot

filters (CSFs); new catalyst technology for hydrogen production and gas to liquids (GTL) and new products for Pharmaceutical Materials. We believe the group is particularly well positioned for organic growth over the next few years. In the longer term fuel cell components remain an exciting market opportunity.

Our funding policy is to maintain a strong balance sheet with conservative gearing and use cash generated to invest in organic growth and bolt-on acquisitions. Where cash generated exceeds our investment requirements we will return the money to shareholders either in the form of share buy-backs or special dividends.

## Review of Results 2004/05

Johnson Matthey made good progress in 2004/05 with profit before tax, exceptional items and goodwill amortisation up 4% despite adverse exchange translation. Earnings per share before exceptional items and goodwill amortisation increased by 5%.

On a constant currency basis both Catalysts and Precious Metal Products Divisions achieved 6% growth in operating profit. Pharmaceutical Materials was 2% down as a result of the expiry of the carboplatin patent while Colours & Coatings continued its good recovery with profits 17% up.

Cash generation was good with a net £16.1 million used to buy back shares and net borrowings reduced by £24.9 million. The group is well positioned to benefit from organic growth over the next few years and we have also taken action to improve the returns on underperforming assets.

Total sales grew by 3% to £4,639 million. At constant exchange rates sales grew by 7% with most of the increase coming from more buoyant trading conditions for platinum group metals and higher average prices. Sales excluding the value of precious metals fell by 2% to £1,200 million. This fall partly reflected the impact of exchange translation but also lower pass through costs for autocatalyst substrates.

Operating profit before exceptional items and goodwill amortisation rose by 1% to £208.1 million. Adverse exchange translation reduced profits by £8.0 million compared with 2003/04 mainly because of the fall in the value of the US dollar which averaged \$1.85/£ compared with \$1.69/£ for the last financial year. Translated at last year's exchange rates, operating profit before exceptional items and goodwill amortisation increased by 5%.

Interest was £3.0 million lower than last year as a result of lower average borrowings and more favourable average interest rates, particularly for platinum. The return on retirement benefits assets and liabilities improved by £3.2 million reflecting the increased funding surplus at 31st March 2004.

Profit before tax, exceptional items and goodwill amortisation increased by 4% to £204.0 million. Earnings per share before exceptional items and goodwill amortisation rose by 5% to 67.1 pence benefiting from a more favourable average tax rate.

Total exceptional items amounted to £51.9 million. Most of this charge related to the loss on disposal of Pigments & Dispersions and the restructuring of underperforming assets. We expect that this process will ultimately generate £50 million of additional cash which we are using to buy back shares.

Taking into account exceptional costs and goodwill amortisation, profit before tax on a statutory basis fell by £47.0 million to £131.0 million and earnings per share were 15.4 pence lower at 40.6 pence.

The board is recommending to shareholders a final dividend of 19.0 pence, making a total dividend for the year of 27.7 pence, an increase of 5%, which is in line with the growth in earnings per share before exceptional items and goodwill amortisation.

## Outlook

The outlook for the next few years is very encouraging. We expect the group to achieve good top line growth from the introduction of new products and also generate cash.

The group's profits were higher in the first half of 2004/05 than in the second half, partly as a result of exchange translation. In 2005/06 we expect this trend to be reversed, with most of the growth coming in the second half of the year.

The much publicised problems in the US car industry are likely to have some impact on Johnson Matthey's results in the first half of 2005/06. We expect car production to be down in the US in our first half which will reduce demand for autocatalysts in that region. However, both Europe and Asia are now bigger car producing regions than the US and Johnson Matthey's businesses in those regions are continuing to see good demand which should more than offset the shortfall in the US. In the first half of 2005/06 we expect profits in our Pharmaceutical Materials Division will be down on the equivalent period in 2004/05 when we were still benefiting from the carboplatin patent, which expired in October 2004.

Despite these factors the underlying growth trend is favourable. HDD legislation in Europe will begin to have an impact in October 2005 and we expect to see demand for aftertreatment devices from original equipment manufacturers start to grow in the second half of the year. We also expect sales of catalysed soot filters for light duty diesel vehicles to grow during the year. Pharmaceutical Materials should benefit from new product launches in early 2006.

Earnings per share will also benefit from the share buy-backs we have undertaken using the proceeds generated by our programme to improve the returns on underperforming assets. We expect to purchase an additional £25 million of shares in the first half of 2005/06. We have completed our review of underperforming assets and do not expect any further exceptional rationalisation costs in 2005/06.

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## Operations

Johnson Matthey has operations in 34 countries and employs around 7,400 people. It is organised into four global divisions: Catalysts, Precious Metal Products, Pharmaceutical Materials and Colours & Coatings.

### Catalysts Division

#### Description of the Business

Catalysts Division consists of three global businesses:

#### Environmental Catalysts and Technologies (ECT)

ECT comprises Johnson Matthey's global autocatalyst, heavy duty diesel and stationary source emission control businesses. We are a world leading manufacturer of catalysts for vehicle exhaust emission control and a leader in catalyst systems for the reduction of volatile organic compound emissions from industrial processes. Manufacturing takes place in the USA, UK, Belgium, Mexico, Argentina, South Africa, Japan, Malaysia, India and China. R&D facilities are in the USA, UK, Sweden, Japan and Brazil.

#### Process Catalysts and Technologies (PCT)

PCT manufactures base and precious metal process catalysts, fine chemicals and electrochemical products. Our platinum group metal (pgm) refining business recovers spent catalysts and other secondary material and also refines primary pgms from global mining operations. Manufacturing facilities are in the UK, USA, Germany, India and China. Our Research Chemicals business is based in the USA, UK and Germany.

#### Fuel Cells

Johnson Matthey is the world leader in catalysts and catalysed components for fuel cells.

#### Performance in 2004/05

Catalysts Division's sales rose by 4% to £1,184 million. At constant exchange rates the increase was 7%. Sales excluding the value of precious metals fell by 3% to £698 million. At constant exchange rates sales excluding the value of precious metals rose slightly. Sales growth was held back by lower pass through substrate costs associated with the increasing proportion of diesel catalysts sold.

The division's operating profit increased by 2% to £111.5 million. At constant exchange rates operating profit grew by 6%.

#### Environmental Catalysts and Technologies

Environmental Catalysts and Technologies achieved good growth in profits in autocatalysts, with all the growth coming in Europe and Asia. Profits were lower in North America. In Johnson Matthey's financial year global light duty vehicle sales grew by 2.9%, with most of the growth arising in Asia where sales rose by 4.1%. Sales in Europe increased by 1.7%, with most of the growth coming in Eastern Europe. In North America light duty vehicle sales were slightly up but domestic production fell by 1.8% with an increased number of imports mainly from Asia.

#### Light Vehicle Sales and Production

		Year to 31st March		
		2005	2004	change
		millions	millions	%
North America	Sales	19.46	19.35	0.6%
	Production	15.56	15.85	-1.8%
Europe	Sales	17.98	17.68	1.7%
	Production	20.30	19.90	2.0%
Asia	Sales	13.68	13.14	4.1%
	Production	21.10	19.70	7.1%
Global	Sales	62.09	60.36	2.9%
	Production	63.00	60.80	3.6%

Source: Global Insight

ECT's strong performance in Europe reflected the continued growth in diesel car sales where Johnson Matthey has leading technology. For the year to 31st March 2005 diesel car sales in Western Europe accounted for nearly half the market for cars. There is increasing focus on reducing particulate emissions from diesel vehicles in Europe and Johnson Matthey has been working closely with many of the leading car companies to develop catalysed soot filters (CSFs) which remove particles from diesel exhaust emissions. CSFs are likely to be required on all diesel cars in Europe from 2010, but many car manufacturers plan to fit these devices much earlier. We are investing in new production capacity to manufacture CSFs and expect sales to grow in 2005/06.

Our autocatalyst businesses in Asia benefited from strong demand. In India, where Johnson Matthey has a strong market position, car sales grew by 25% while the growth rate in car sales slowed in China but was still 12.5% up on prior year. We are expanding our factory in Shanghai and we have also put in a new production facility next to our technical centre in Japan. This has been well received by customers and we expect to see additional sales in Japan in 2005/06. In North America car production fell, particularly in the final quarter of our financial year when domestic production was down 4.5%. Autocatalyst volumes were also down and Johnson Matthey's profits in the region were lower than last year. In South America vehicle production showed a strong recovery and our facility in Argentina was well ahead of prior year.

Figure 1

HDD On Road Regulation Development

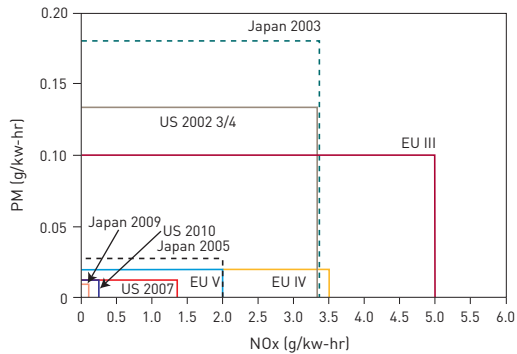
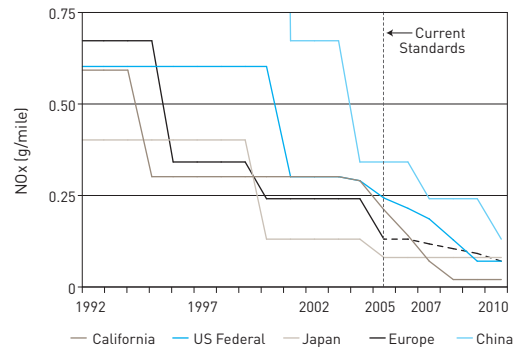


Figure 2

Light Duty Petrol-engined Vehicle NOx Emission Standards



In 2003/04 ECT benefited from strong sales of heavy duty diesel (HDD) retrofit products in Japan supported by an incentive programme from the Tokyo Metropolitan Government. There were no similar sized programmes in 2004/05 and consequently revenues from HDD retrofit products were down. The outlook for HDD sales to original equipment makers is very encouraging. New legislation on HDD vehicle emissions (EU IV) will come into effect in Europe for new models in October 2005 and for all new vehicles in October 2006. New legislation in the US starts in January 2007. The great majority of truck and bus manufacturers will be using aftertreatment devices to meet this legislation and Johnson Matthey has leading technology to meet the new standards.

Tightening emissions standards worldwide are the most important driver of ECT's business. Following closely behind these first waves of on road heavy duty diesel emissions regulations are a series of tighter standards which will come into effect in Europe, Japan and the United States over the next five years. These are illustrated in figure 1 and require major reductions in the emissions of both particulate matter (PM) and oxides of nitrogen (NOx). This presents significant challenges for manufacturers of HDD engines and vehicles. While engine modifications can often be used to lower the level of one of these pollutants, this results in an increase in the other. For example an engine can often be made to run at a lower temperature to reduce NOx emissions but this will result in higher emissions of PM. As legislation tightens it will force the use of highly sophisticated catalyst systems. It is estimated that by the end of 2008, this HDD legislation will have created a market for catalysts worth \$600 million per annum in sales excluding the value of precious metals.

The success of Johnson Matthey's Continuously Regenerating Trap (CRT®) technology in retrofit programmes has established the CRT® technology as the benchmark for

control of hydrocarbons (HC), carbon monoxide (CO) and PM emissions from heavy duty diesel vehicles. This has resulted in the generation of millions of hours of operating data on a wide variety of HDD engines and places the company in a strong position to assist HDD original equipment manufacturers as they prepare to meet tougher emissions standards.

Control of NOx emissions from diesel engines presents some formidable challenges as diesel exhaust contains a great deal of oxygen and thus is a strongly oxidising atmosphere. The removal of NOx, however, requires a reducing atmosphere (one containing very little oxygen) or a reductant that can selectively reduce the NOx in the presence of excess oxygen. Therefore, in order to achieve the reduction of all four pollutants (HC, CO, PM and NOx) it is necessary to use highly sophisticated systems. There is no single solution to fit all applications. Johnson Matthey has a full 'tool box' of HDD emission control technologies which will enable customers to meet continuously tightening standards, whichever approach they choose.

In addition to on road HDD emissions legislation, which will undoubtedly continue to tighten beyond 2010, there is also legislation in place in the European Union and the United States that will take effect from 2011 requiring off road or 'non road' vehicles such as construction, mining and agricultural equipment to meet the same tight emissions standards. This is an additional new market that will be of a similar size to the on road HDD market and will have similar technology requirements. Again Johnson Matthey is well positioned to benefit from this legislation.

Emissions standards for light duty gasoline and diesel vehicles also continue to tighten around the world. Figure 2 illustrates legislated limits for emissions of NOx in the world's major car markets. Emission standards for HC and CO are also following this worldwide trend and, as outlined above, there is

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increasing focus on particulate emissions from diesels in Europe. This will undoubtedly spread to other parts of the world as the use of light duty diesel engines increases. Continuously tightening emissions standards bring new technical challenges to our customers which require innovative, high performance catalysts to meet them. This will drive the growth of our autocatalyst business well into the next decade and beyond.

## Process Catalysts and Technologies

Process Catalysts and Technologies performed well in 2004/05 with sales and profits comfortably ahead of the previous year. At the end of last year we announced the acquisition of the AMC group of companies (AMC), the market leading supplier of Sponge Nickel™ catalysts located in Tennessee, USA. Sponge Nickel™ catalysts are extensively used in the pharmaceutical and speciality chemicals industries and are often the first catalysts to be evaluated when designing a new chemical process. The former AMC business, now Johnson Matthey Catalysts, Tennessee, performed in line with our expectations and made a welcome contribution in its first full year of ownership.

Our other catalyst businesses also had a good year, nowhere more so than the Ammonia, Methanol, Oil and Gas (AMOG) business which saw strong growth in income from both licensing and catalyst sales and another excellent performance from its gas processing and purification segments. The development of a new class leading methanol flowsheet came a stage closer with the formation of OneSynergy™, a partnership with Davy Process Engineering and Aker Kvaerner to take advantage of Johnson Matthey's new catalyst and process technologies for both methanol synthesis and reforming chemistry.

The dramatic rise in the price of oil has continued to focus investment on the economic use of natural gas, both as a precursor for transport fuel and as a petrochemical intermediate. This, coupled with increased demand for hydrogen in oil refineries worldwide driven by the need to reduce the sulphur content of fuels, has and will continue to drive demand for the AMOG business' products and will allow it to grow ahead of general economic indicators.

The high price of oil also benefited Tracerco, PCT's oil processing services business which saw record demand during 2004/05. In addition to increased sales of services and equipment to production platforms and refineries, Tracerco continues to benefit from good demand for its hydrocarbon tagging products. This results from action taken by various governments around the world to detect and prevent fuel adulteration.

High oil prices also help to boost interest in the gas to liquids process, which turns often stranded natural gas into sulphur free diesel fuel for which there is a growing market driven by tightening fuel standards. During the year we have made progress in developing our technologies for the two key stages of this process; syngas generation and Fischer-Tropsch catalysis.

Our Polymers, Chemical Catalysts and Edible Oils (PCEO) business recovered from the effect of last year's rapid rise in nickel prices and hydrogenation catalysts in general had a good year. Market overcapacity and anticipation of the expiry of a key patent softened income in polymers but important successes in a number of new product areas look likely to stabilise this business in the near term.

The platinum group metal refining business continued to be adversely affected by the weak palladium price and overcapacity in the market. After an extensive review we decided to restructure the business in the UK and reduce

the intake of low grade materials which had left us with large quantities of residues which are difficult to process. An exceptional charge of £10.2 million has been taken to cover the cost of this rationalisation. One objective of the restructuring will be to reduce the quantity of precious metals held in the refinery and thereby release over £20 million of cash from inventory reduction.

Our Research Chemicals business continued its recent record of strong growth in 2004/05. During the course of the year we acquired the operations of Lancaster Synthesis from Clariant AG. The acquisition was temporarily delayed as a result of a serious fire at Lancaster's UK premises in late July. However the deal was completed at the end of September at a significantly reduced cost. The Lancaster business represents a good fit with our Research Chemicals business and excellent progress has been made in integrating stock and order management systems while maintaining the value of the Lancaster brand with its strong market franchise.

#### **Fuel Cells**

The annual cost of our Fuel Cells business reduced by £1.1 million to £10.4 million. The market for stationary fuel cells has not grown as quickly as our customers had expected but developments in automotive fuel cells continue to be very encouraging. At this stage in the development of fuel cells the emphasis is very much on establishing durability in real world applications. This inevitably takes time, particularly for a number of the stationary applications for which durability requirements are very demanding.

During the year we transferred most of our UK fuel cell activities including product development to our facility at Swindon, while longer term research remains at our technology centre at Sonning Common. This will allow the business to operate more efficiently with integrated marketing, product development and production teams based at Swindon working in close collaboration with key customers to meet nearer term targets, while the research group at Sonning Common focuses on the next generation of materials needed for mass automotive markets in the future.

The first fuel cell vehicles to be manufactured in any quantity will be powered by hydrogen. In California, the State government is taking action to develop a network of filling stations for hydrogen powered vehicles. The success of hybrid cars has shown that customers are prepared to pay a premium for environmentally friendly vehicles. Most of the world's major car companies are continuing to invest heavily in the development of fuel cell vehicles as concerns over fuel security, global warming and air quality become more pressing.

## **Precious Metal Products Division**

### **Description of the Business**

Precious Metal Products Division is organised into two groups:

#### **Platinum**

Consists of our worldwide platinum marketing and fabrication activities. Marketing is headquartered in London with support facilities in Philadelphia and Hong Kong. We are the world's leading distributor of platinum group metals and the sole marketing agent for Anglo Platinum, the world's largest producer of platinum. Our platinum fabrication business makes a wide range of platinum group metal products primarily in the UK and USA.

#### **Gold and Silver**

Comprises our worldwide gold and silver refining and bullion manufacturing operations. Johnson Matthey is a market leader in the refining of gold and silver. The business serves the world's mining industries and recycles secondary scrap material. Gold and silver refining operations are located in the USA, Canada and Hong Kong.

### **Performance in 2004/05**

Precious Metal Products Division's sales grew by 4% to £3,069 million, reflecting more buoyant trading conditions for platinum group metals (pgm) and higher average prices. At constant exchange rates sales grew by 8%. Operating profit increased by 3% to £45.4 million, despite the revised terms of the renewed contracts with Anglo Platinum and adverse exchange translation. At constant exchange rates operating profit was 6% up.

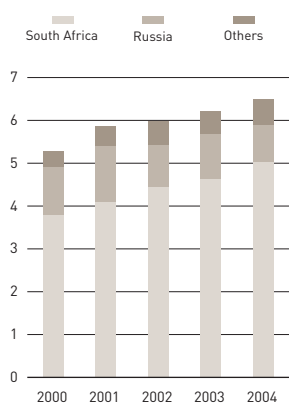
#### **Platinum**

The price of platinum reached its peak for 2004/05 of \$937/oz in April, a 24 year high, driven by good physical demand and substantial speculative interest. After a sharp correction in late April and early May, which saw the price fall back to \$783/oz, the price of platinum followed an upward trend for the rest of the year. The average price was \$848/oz, a 14% increase on 2003/04.

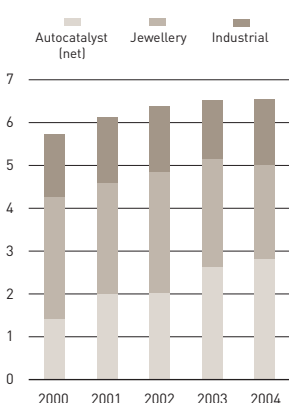
Total consumption of platinum edged up marginally in 2004/05, with the autocatalyst sector underpinning demand. The increase in market share of diesel cars in Europe and tightening emission controls for diesel powered trucks in Japan were key drivers. However, purchases of platinum for jewellery manufacture fell in 2004/05 as a result of the strength and volatility of the platinum price. Demand in the key Chinese market declined, while consumption in North America and Japan also suffered.

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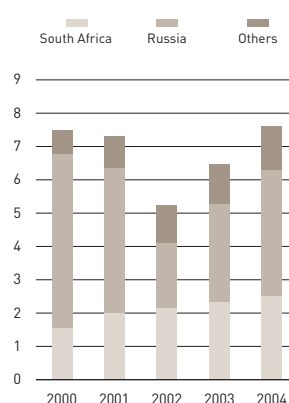
Supply of Platinum 2000-2004  
Million oz



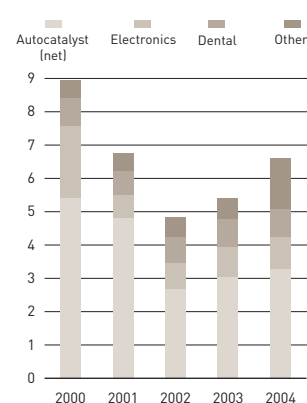
Demand for Platinum 2000-2004  
Million oz



Supply of Palladium 2000-2004  
Million oz



Demand for Palladium 2000-2004  
Million oz



Supplies of platinum expanded faster than demand as South African output exceeded 5 million oz for the first time. Although platinum demand again exceeded supplies, the market deficit was reduced to the lowest level for six years.

The palladium price also reached its peak for 2004/05 in April, touching \$333/oz as investors extended their already substantial long positions. However, production and stocks were more than adequate to meet demand and the price fell back to a low of \$178/oz in December. The average price for the year was \$219/oz, an increase of 9% on 2003/04.

Physical demand for palladium climbed steeply in 2004/05. Most of this increase came from the jewellery sector, led by the rapid development of palladium jewellery manufacturing in China. Demand in the autocatalyst sector was also up as US car companies increased their market purchases, having run down their stocks in 2003.

Growth in demand was almost exactly matched by a rise in supplies, particularly from Russia where a considerable volume of metal was sold from government stocks. Total supplies exceeded demand by a significant margin, leaving palladium in surplus for the fourth consecutive year.

The price of rhodium staged a sharp recovery in 2004/05. Growing auto demand and increased speculative interest resulted in a tight and illiquid market. The average price more than doubled to \$1,203/oz in 2004/05, reaching a peak of \$1,665/oz in February 2005.

Despite the revised terms of the new Anglo Platinum contract and adverse foreign currency translation, profits from the division's marketing and trading operations were higher than in 2003/04. Commission income benefited from higher average metal prices and trading margins improved as a result of more favourable platinum and rhodium markets.

The division's pgm manufacturing business continued its profitable growth, benefiting from good customer service and technical leadership. Demand for our pgm catalyst, sheet and wire products for industrial applications was strong throughout the year. Our medical parts business, based in California, also recorded excellent growth. Increased usage of nitinol in medical device applications in both Europe and the US, resulted in a strong demand for products from our San Jose factory.

Business levels at our precision machining factory in San Diego, where we completed our first full year since relocating to an expanded facility, were also strong. To increase our product offering of key medical device components, we acquired, in May 2004, a manufacturer of medical hypotubes based in Temecula, California. The business had a very successful first year and we are now well positioned at all of our production facilities to take advantage of continued growth in the medical devices market.

## Gold and Silver

In September 2004 the board took the decision to close the group's UK gold and silver refinery. Tight refining margins and the weaker US dollar resulted in a loss in 2003/04 of £1.6 million after metal interest and a similar performance in the first five months of 2004/05. The closure was completed on schedule, by the end of March 2005, at a cost of £13.2 million. As part of the closure programme a significant proportion of the customers from our UK refinery were successfully transferred to our refineries in Salt Lake City and Toronto, where spare capacity existed. This boosted profits in North America which finished ahead of 2003/04. Refining volumes in Hong Kong were good in 2004/05 but fell short of the exceptional prior year levels. However, sales of Johnson Matthey group products into the burgeoning Chinese economy more than compensated for this.

## Pharmaceutical Materials Division

### Description of the Business

Pharmaceutical Materials Division is a global, integrated supplier of active pharmaceutical ingredients (APIs), which provides services to pharmaceutical companies through every phase of the development of a new product.

The division's Macfarlan Smith (UK) and West Deptford (USA) businesses provide a full range of commercial scale manufacturing services for APIs to both generic and branded pharmaceutical companies. Both businesses specialise in the manufacture of low volume, high value products, especially controlled drugs.

Pharma Services (USA) provides contract research and development and manufacturing services to pharmaceutical companies from pre-clinical through to commercial launch.

The Pharmaceutical Materials Ireland business specialises in the manufacture of prostaglandin APIs, which are very low volume, high value, chemically complex molecules.

### Performance in 2004/05

Pharmaceutical Materials Division's sales fell by 6% to £132 million. Adjusting for exchange translation the drop in sales was 2%. The fall in sales reflected lower selling prices for carboplatin, which went off patent in October 2004, and lower revenues from contract research, partly offset by increasing sales of controlled drugs. Operating profit fell by 5% to £40.0 million partly as a result of adverse exchange translation. At constant exchange rates the fall in operating profit was 2%, in line with the drop in sales.

### Macfarlan Smith

Macfarlan Smith, which is based in Edinburgh, UK and manufactures controlled drugs for sale to generic pharmaceutical companies, performed well in the year. Sales and profits were both ahead of last year with most of the growth coming from high margin specialist opiate products. The world market for drugs to manage severe pain is growing at around 6% per annum as medicine is able to treat more acute conditions; the world's population ages; and people are generally less tolerant of pain. Overall growth of the opiates market is driven primarily by the introduction of new applications and new dosage forms for specialist opiates such as oxycodone, hydromorphone and buprenorphine, the markets for some of which are growing at double digit rates.

Macfarlan Smith's new facility to manufacture low volume, high potency products (mainly analgesics), which we announced last year, has made a valuable contribution to profits in its first

year of operation and we expect to achieve further growth in this specialist market in 2005/06. During the year we continued our programme of capacity expansion at the Macfarlan Smith site, particularly in support of growth in specialist opiates.

### West Deptford

As anticipated, our active pharmaceutical ingredient manufacturing business in the US, which is based in West Deptford, NJ, saw its profits fall in the second half of 2004/05 as the contribution from carboplatin was reduced following the expiry of the patent in October 2004. Now that the patent has expired we expect to supply to both Bristol-Myers Squibb and generic producers but at lower margins. Sales of other products grew, including opiates where we have successfully transferred manufacturing technology from Macfarlan Smith.

Growth in sales of opiate drugs will continue as an increasing number of customers obtain regulatory approvals to market products containing APIs manufactured at West Deptford. Sales of non-opiate controlled drugs also improved during the year and significant progress was made on the development of several attractive generic products which will reach commercialisation over the next few years.

### Pharma Services

During the year we changed the name of Pharm-Eco to Pharma Services to better reflect its market segment. Although manufacturing continued to grow, contract research revenues were down in the second half of the year and profits were below last year.

In 2004/05 Pharma Services increased its investment in the development of several low volume, generic APIs. While these will take several years to reach commercial approval this will serve to broaden the portfolio of the Pharma Services business and counteract the somewhat lumpy profile of the contract research and development side of the business.

### Ireland

During 2004/05 Cascade Biochem, which we acquired in 2002, was consolidated into its Cork, Ireland facility and renamed Pharmaceutical Materials Ireland. The business has continued to expand its customer base and geographic coverage during the year. Regulatory filings of new generic products containing our prostaglandin APIs have been made by our customers and are currently in review stages. Our products are also being qualified for new generic drug dosage forms targeted for sale in major world markets.

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## Colours & Coatings Division

### Description of the Business

Colours & Coatings Division is ranked among the world's top integrated suppliers of decorative products and associated raw materials for ceramics and glass. The division is structured into two businesses; Colour Technologies and Ceramics.

### Ceramics

Headquartered in Spain, our Ceramics business is a leading global supplier of raw materials and intermediate products to the ceramic industries. The business has a presence in all the major geographical regions with core manufacturing facilities in Spain, Italy, UK, Brazil, USA, Malaysia, India and China.

### Colour Technologies

Headquartered in the Netherlands, our Colour Technologies business manufactures black obscuration and silver conductive enamels for automotive glass. It also makes colours, enamels and decorative precious metal products for other glass applications such as bottles and architectural glass as well as for tableware and other ceramic applications.

### Performance in 2004/05

We restructured Colours & Coatings Division during the year following the sale of Pigments & Dispersions in September 2004 for £22.2 million (after costs). Several other sites are in the process of being closed, the largest of which is the division's decal factory in Stoke-on-Trent. An exceptional charge of £10.3 million has been taken to cover the cost of these closures. The decorative precious metals, glass coatings and tableware businesses have been renamed Colour Technologies and will be transferred to Precious Metal Products Division and included in that division's results next year. The remaining business, Structural Ceramics, has been renamed Ceramics and will be shown as a stand alone division in 2005/06.

Sales for the division, excluding Pigments & Dispersions, rose by 8% in 2004/05 to £242 million. At constant exchange rates sales grew by 12%. Operating profit increased by 13% to £27.4 million. At constant exchange rates profits grew by 17%.

### Ceramics

Our Ceramics business had sales of £166 million and contributed about two thirds of the profits of the division. It supplies decorative materials for ceramic products, mainly to the tile industry. The business achieved good growth in sales and profits in 2004/05. Demand for tiles in the Western European market was flat and the strength of the euro

adversely impacted European tile producers who are major exporters to other parts of the world. More than 50% of the tiles manufactured in Italy and Spain are exported outside the euro zone. As a consequence, prices and volumes in Europe remained under pressure. However, there was good growth in China, India and Brazil where Johnson Matthey has production facilities and is well represented. Demand was also strong in Eastern Europe, especially Poland and Russia, and our sales into the region showed good growth.

The Ceramics business is realising the benefits of investments made in recent years to position it as one of the lowest cost, high quality producers in the world. While growth rates in the more mature markets like Western Europe are modest, the business is strongly cash generative and there are a number of important growth opportunities in Eastern Europe, the Middle East and Asia. During 2004/05 the Ceramics business started work on the expansion of its manufacturing facility in China and it has plans for further expansion in both China and India over the next few years to meet rapidly growing demand in the Asia region.

### Colour Technologies

Colour Technologies performed well in 2004/05. Sales to the automotive sector increased, particularly sales of both black obscuration enamels and conductive silver paste. This was mainly due to increased market penetration in the United States and South America and the launch of innovative new products with enhanced technical and processing characteristics. Demand for decorative products for other glass applications was also up, benefiting from new product introductions which are helping the business to consolidate its market leading position in this segment.

During the year Colour Technologies launched new ranges of lead free enamels for architectural and appliance glass applications and the business remains fully committed to minimising the environmental impact of its products. Towards the end of the year it launched ranges of inorganic inks for both ink jet and digital printing applications.

Following the announcement of the closure of the decal factory in Stoke-on-Trent, the ceramic side of Colour Technologies' business has been refocused on a much reduced range of decorative products for the tableware industry. Sales into this industry in 2004/05 were at the same level as the prior year, despite the continued contraction of the UK tableware market. Going forward, the business has a small flexible team with innovative products and a commitment to world class technical support and it is hoped that it will see a return to growth from this much reduced base.



## Research & Development

Research and development is the lifeblood of Johnson Matthey's high technology businesses. We maintain a high level of R&D expenditure to ensure the continuous flow of new products and technologies to provide our customers with cost effective solutions to legislated and technical requirements. In 2004/05 Johnson Matthey spent £58.2 million on research and development.

### Johnson Matthey Technology Centre

The Johnson Matthey Technology Centre (JMTC), located at Sonning Common, UK is the group's main centre for longer term research. It employs over 120 scientists, specialists in the fields of catalysis, precious metals, materials science and many other disciplines in which Johnson Matthey operates. JMTC has state of the art facilities for preparing and testing catalysts and other products as well as a world class analytical science group, equipped with the latest tools to characterise and understand the materials with which Johnson Matthey works.

In addition to projects directly sponsored by the operating divisions to meet their long term objectives, JMTC also runs a set of core science projects to extend the group's knowledge of the science at the heart of many of its businesses, particularly in the fields of catalyst engineering, modelling, preparation and characterisation. This knowledge can then be applied to accelerate and improve product development across the group.

JMTC works in close collaboration with an extensive network of technology centres and development groups within Johnson Matthey's global businesses. Examples of two long term projects currently underway at JMTC are described below followed by a review of R&D activities within the operating divisions.

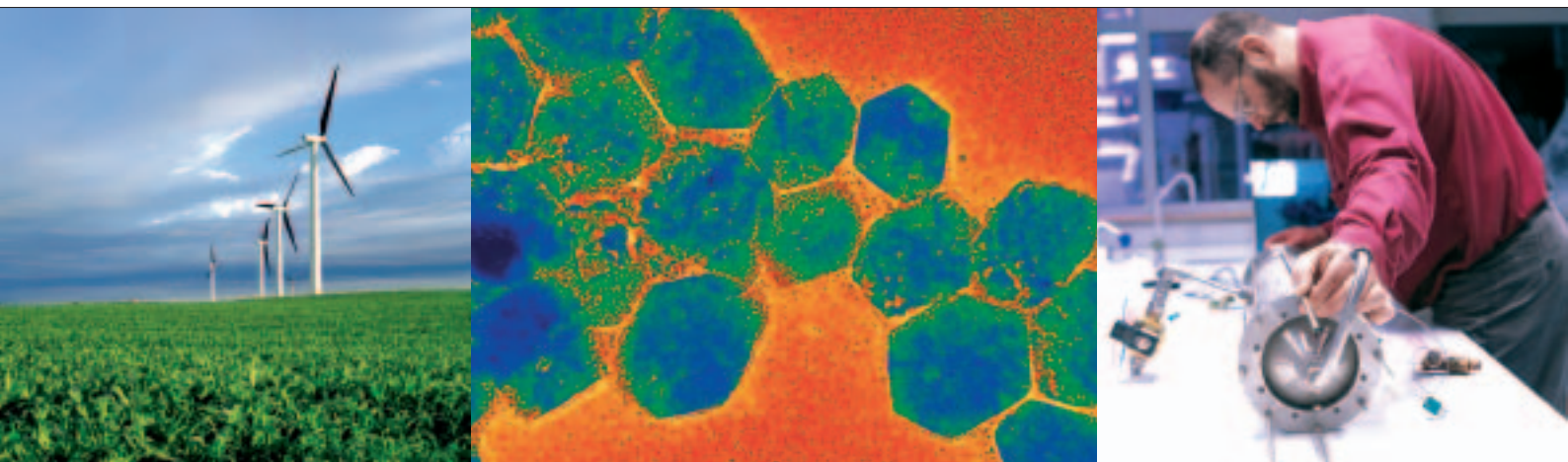
### Emissions Control

Over the next five years, advanced compression-ignition engines are expected to deliver much better fuel economy than the engines currently available. Apart from lowering carbon dioxide emissions, the new engines will produce very low SO<sub>x</sub> (oxides of sulphur) emissions by running on ultra low sulphur diesel, biodiesel and gas to liquids (GTL) fuels. Even so, their exhausts will still contain the other common pollutants from internal combustion engines; carbon monoxide, hydrocarbons, NO<sub>x</sub> (oxides of nitrogen) and particulates.

At the Johnson Matthey Technology Centre we are already designing exhaust aftertreatment systems for 2010 and beyond, when conventional three-way gasoline and diesel catalysts will no longer meet the demands of new engine technologies. The experience that we have gained over 30 years means that we have an extensive knowledge base on which to build our designs. By inputting performance measurements into mathematical models, we are even able to predict how potential catalysts would perform on vehicles that do not yet exist.

Among the technologies we are developing is a very simple strategy for destroying NO<sub>x</sub>. Known as hydrocarbon-SCR, this technology does not require a special reductant to be carried on board the vehicle, but relies on a small amount of fuel being injected into the exhaust. Our biggest challenge is to avoid the fuel immediately combusting. In order to achieve this we are engineering a catalyst surface that provides a reaction pathway for the fuel molecules to react with NO<sub>x</sub>, before they can react with oxygen.

# Operating and Financial Review



## Hydrogen

Using hydrogen in a fuel cell allows electricity to be produced without passing through a combustion process. Ultimately the hydrogen must come from a renewable source but society can still reap the benefits of using hydrogen as a fuel (improved air quality and reduced dependence on a single fuel source) even if it is produced from non-renewable resources. Johnson Matthey research is successfully extending existing processes and developing new catalyst materials to allow a wide range of different feed stocks to be converted into hydrogen. These include difficult feed stocks such as diesel as well as carbon neutral biofuels.

The purity of the hydrogen produced is also an issue as carbon monoxide (CO), a by-product of hydrogen production from hydrocarbon reforming, is a potent poison of conventional fuel cell catalysts. Our research teams are working both to improve the performance of fuel processors in order to reduce the level of CO generated and to develop novel fuel cell electrocatalysts that possess a degree of CO tolerance.

In the longer term, radically different technologies will emerge to power the hydrogen economy, such as catalytic water splitting and solar reforming. All pose real technical challenges, but open up new applications for Johnson Matthey's core technologies in catalysis, coatings and purification. The Johnson Matthey Technology Centre is collaborating with experienced partners in European Union sponsored projects across these areas. Such participation allows us to explore these new business opportunities and to build relationships with other technology leaders from their outset.

A key enabling technology for fuel cell powered vehicles is the development of a safe and efficient on board hydrogen store. This is a pressing technical need as the car companies move toward the commercialisation of fuel cell cars. Johnson Matthey has wide ranging expertise in nanoparticles, coatings

and materials processing as well as a great deal of experience in the area of hydrogen storage and use. These skills have been brought together at JMTC to address this important challenge. In conjunction with a group of UK and European universities we have developed new techniques for alloying and activating magnesium to produce a solid state hydrogen store that operates at significantly lower temperatures than could previously have been achieved. We have now run a fuel cell coupled with a demonstration hydrogen store, giving us valuable insight into the heat balance required in a full size system.

## Catalysts Division

Environmental Catalysts and Technologies continues to invest in state of the art equipment and dedicated personnel for the development and testing of catalysts to fulfil its customers' needs for products which meet ever tightening emissions legislation around the world. Through this investment in R&D, Johnson Matthey has become a leader in diesel emission control technologies for both heavy and light duty diesel applications. For heavy duty diesel applications we offer a complete 'tool box' of high technology solutions to meet tightening emissions limits for both oxides of nitrogen (NO<sub>x</sub>) and particulates. We are also at the leading edge of catalysed soot filter technology for removal of particulates from light duty diesel exhausts. In addition, Johnson Matthey continues to invest in the development of improved products for the treatment of exhaust from gasoline engines.

During the year our R&D facility in Kitsuragawa, Japan was significantly expanded, with the addition of a new CVS testing facility for 'on vehicle' catalyst evaluation and test cells for catalyst ageing. This investment supports Johnson Matthey's growing business with Asian vehicle manufacturers.

Process Catalysts and Technologies has focused its research activities around a number of core science projects.

The intent is to gain critical mass in developing key generic technologies which can be applied to more than one product group. With a widely diverse palette of catalyst manufacturing and development tools PCT has seen significant benefits from this approach.

One area of focus is steam reforming. Here, we have commissioned a major new investment in testing capacity which will underpin the science behind developments in syngas preparation for both gas to liquids and methanol process designs. We are also investing in an R&D project aimed at developing more efficient routes for manufacturing polyesters. Development work, in collaboration with a number of customers, focused on the reduction of the trans-fatty acids content of hydrogenated oils is beginning to win new business.

During the year the Fuel Cells business moved all of its product development activities, the majority of which had previously been carried out at the Johnson Matthey Technology Centre at Sonning Common, to its new manufacturing facility in Swindon, UK. This reflects the organisation of R&D across the Johnson Matthey group where development work is carried out within the operating divisions and longer term, fundamental research is carried out at the Johnson Matthey Technology Centre. JMTC now has a greater responsibility for the fundamental science of fuel cells. This work is critical to the business' success in the long term fuel cells market. The Fuel Cells business and its JMTC based research group are working closely with customers and suppliers to demonstrate that the advanced materials they currently have under development will meet the demands of future mass markets. This is particularly true in the area of catalysis where increased stability and higher activity are key goals.

#### **Precious Metal Products Division**

Precious Metal Products Division's global research and development programmes focus on several key areas of new product and technology development. Work continues on catalysts for ammonia oxidation which reduce the formation of unwanted by-products, in particular nitrous oxide. The Kyoto Treaty, which was ratified by a number of countries in February 2005, lists nitrous oxide as one of five greenhouse gases. With significant financial incentives available for reducing emissions, this has created a high level of interest within the division's customer base. Products that utilise technology jointly developed with Process Catalysts and Technologies are performing well in customer trials. We expect to commercialise these in 2005/06.

The division has also increased its R&D effort on new medical alloys. In particular we are focusing on novel alloys to improve strength, flexibility, magnetic resonance imaging (MRI) compatibility and radiopacity for a wide range of medical device applications.

#### **Pharmaceutical Materials Division**

Pharmaceutical Materials Division's research and development is focused on commercial products to be manufactured and marketed by the division's four business units. Technology required for the manufacture of commercial scale products includes primarily the development of chemical manufacturing processes and methods for the analysis of these products. This technology is essential to achieve competitive market positions and to obtain regulatory approval for products.

Contract drug development services offered by Johnson Matthey Pharma Services include medicinal chemistry, process development and initial scale-up of potential new drugs. Each of Pharmaceutical Materials Division's businesses has developed substantial chemical know-how in its respective market niches and they collaborate closely on new technical challenges. Combined with Johnson Matthey's core expertise in catalysis, chiral catalysis and organometallic chemistry, the division offers the pharmaceutical marketplace a unique range of R&D capabilities.

#### **Colours & Coatings Division**

Colours & Coatings Division continues to place great emphasis on product and process development, both of which are key to our ability to grow sales and sustain margins. Considerable resources are dedicated to research both at the Johnson Matthey Technology Centre and at the major European facilities in the Netherlands, Italy, Spain and UK. The research structure, focused on the core areas of fundamental chemistry, cost reduction technologies and product development, has continued to deliver innovative solutions for the market during the year. Some examples include new ranges of lead free enamels for architectural and appliance glass applications and inorganic inks for both ink jet and digital printing applications. Going forward, management remains focused on delivering a pipeline of market driven research and product developments to underpin future profitability.

# Operating and Financial Review

John Sheldrick Group Finance Director



## Financial Review

### Introduction

Johnson Matthey made good progress in 2004/05 with profit before tax, exceptional items and goodwill amortisation up by 4% to £204.0 million despite adverse exchange translation. Earnings per share before exceptional items and goodwill amortisation rose by 5% to 67.1 pence benefiting from a more favourable tax rate.

Taking into account exceptional costs and goodwill amortisation, profit before tax on a statutory basis fell by £47.0 million to £131.0 million and earnings per share were 15.4 pence lower at 40.6 pence.

Cash generation was good with net borrowings reduced by £24.9 million and gearing 2.8% lower at 42.5%. The board is recommending a 5% increase in the dividend for the year in line with the growth in earnings. In addition, we are using the proceeds of the programme to improve the returns on underperforming assets to buy back shares. A total of 2.5 million shares were purchased in 2004/05 at a cost of £25.2 million and we plan to buy a similar amount in 2005/06 which should be earnings enhancing.

### Sales and Margins

Total sales grew by 3% to £4,639 million, despite the impact of adverse exchange translation. On a constant currency basis sales rose by 7% with most of the increase coming from more buoyant conditions for platinum group metals and higher average prices.

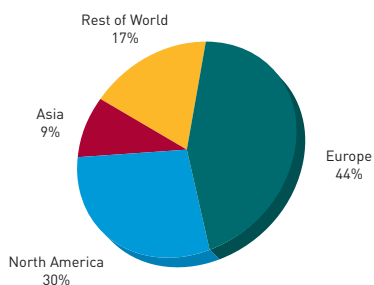
Johnson Matthey's turnover is heavily impacted by the high value of precious metals included in the group's products, particularly in Precious Metal Products Division. The total value of sales varies each year according to metal prices, the mix of metals sold and the level of trading activity. The value of the precious metals included in sales is generally separately invoiced and payment made within a short period. Consequently, although return on sales (operating profit / total external sales) for the precious metals businesses is low, return on investment is high.

To provide a more useful measure of return on sales, the table below shows return on sales by division excluding the value of precious metals. Total sales excluding precious metals were £1,200 million which was 2% down on last year. At constant exchange rates sales excluding precious metals grew by 2%. Sales trends for the individual divisions are discussed on pages 6 to 12.

### Return on Sales excluding Precious Metals

	Sales excluding precious metals		Return on sales excluding precious metals	
	2005 £ million	2004 restated £ million	2005 %	2004 restated %
Catalysts	698	720	16.0	15.2
Precious Metal Products	124	121	36.6	36.7
Pharmaceutical Materials	125	131	32.1	32.2
Colours & Coatings	241	222	11.4	10.9
	<b>1,188</b>	1,194	<b>17.5</b>	17.0
Discontinued	12	30	3.3	8.4
<b>Total Group</b>	<b>1,200</b>	1,224	<b>17.3</b>	16.8

**Geographical Split**  
Operating profit 2004/05



**Operating Profit**

Before exceptional items and goodwill amortisation

	Year to 31st March 2005	2004 restated £ million	change %	2005 at 2004 exchange rates <sup>1</sup> £ million	change %
Catalysts	<b>111.5</b>	109.2	+2	115.8	+6
Precious Metal Products	<b>45.4</b>	44.2	+3	46.8	+6
Pharmaceutical Materials	<b>40.0</b>	42.3	-5	41.5	-2
Colours & Coatings	<b>27.4</b>	24.2	+13	28.4	+17
Corporate	<b>(16.6)</b>	(16.4)		(16.8)	
Continuing operations	<b>207.7</b>	203.5	+2	215.7	+6
Discontinued operations	<b>0.4</b>	2.5		0.4	
<b>Operating profit</b>	<b>208.1</b>	206.0	+1	216.1	+5

<sup>1</sup>excluding South African rand

The group's target for each of its divisions is to achieve a return on sales excluding precious metals in excess of 10%. All four divisions were ahead of that target in 2004/05.

The return for the group improved by 0.5% to 17.3%. The improvement in Catalysts reflects the lower pass through costs for substrates. Colours & Coatings margins improved reflecting the benefit of restructuring and the disposal of the low margin Pigments & Dispersions business.

**Operating Profit / Exchange Translation**

Operating profit before exceptional items and goodwill amortisation rose by 1% to £208.1 million. Growth in profits was again adversely affected by exchange translation.

The main impact of exchange rate movements on the group's results comes from the translation of foreign subsidiaries' profits into sterling. Around 30% of the group's profits were made in North America, mainly in the USA. The US dollar weakened significantly from an average rate of \$1.69/£ in 2003/04 to an average of \$1.85/£ in 2004/05. The average rate for the euro also weakened from €1.44/£ to €1.47/£. The South African rand strengthened from R12.11/£ to R11.53/£ but the translational benefit of that rise was more than offset by the adverse impact of the stronger rand on operating margins. Excluding the rand, exchange translation reduced operating profit by £8.0 million, which is equivalent to 4% of operating profit before exceptional items and goodwill amortisation.

Operating profit by division, before exceptional items and goodwill amortisation, is shown in the following table adjusted for exchange translation (excluding the South African rand).

Translated at last year's exchange rates, operating profit before exceptional items and goodwill amortisation increased by 5%.

On a constant currency basis both Catalysts and Precious Metal Products divisions achieved 6% growth in operating profit. Pharmaceutical Materials was 2% down as a result of the expiry of the carboplatin patent while Colours & Coatings continued its good recovery with profits 17% up. A detailed review of the progress of each division is included on pages 6 to 12.

**Exceptional Items**

Exceptional items for the year amounted to £51.9 million which included a rationalisation charge of £10.2 million to restructure our underperforming UK platinum group metal refining business and a £10.3 million charge for closing a number of former Colours & Coatings' sites following the sale of Pigments & Dispersions and the restructuring of that division. The remaining items were announced in the first half of the year and include a loss of £15.2 million on sale of the Pigments & Dispersions business, of which £5.8 million related to goodwill previously written off to reserves; the closure of the UK gold and silver bullion refinery at a cost of £13.2 million and £3.0 million of acquisition integration costs.

**Interest**

The group's net interest charge fell by £3.0 million to £13.3 million, benefiting from lower average borrowings, particularly in the second half of the year. Metal financing costs were also favourable with interest rates for platinum below the high levels experienced in 2003/04. Average precious metal leases were reduced following the closure of the UK gold and silver refinery in September 2004.

# Operating and Financial Review

The return on retirement benefits assets and liabilities improved by £3.2 million. This credit is shown separately under FRS 17 (the pension accounting standard adopted by the group last year). The rise reflected the increase in the pension fund surplus at 31st March 2004.

## Taxation

The group's tax charge fell by £13.9 million to £44.0 million. The reduction largely related to tax relief on the exceptional costs incurred in the year. Before exceptional items and goodwill amortisation the average tax rate for the year fell slightly from 29.8% to 29.2% with an increase in tax credits received on research and development expenditure.

## Return on Investment

We set a target of 20% for the pre-tax return on assets (ROA) for all our businesses. For the group as a whole ROA was 16.1% which is similar to last year. We expect to see a gradual improvement in the return over the next few years as the benefits of organic growth and actions to improve the returns on underperforming assets come through.

The return on assets for the individual divisions were as follows:

## Return on Assets

	Average net operating assets employed <sup>1</sup>		Return on assets <sup>2</sup>	
	2005 £ million	2004 £ million	2005 %	2004 %
Catalysts	819	783	13.6	13.9
Precious Metal Products	22	34	202.7	131.2
Pharmaceutical Materials	282	281	14.2	15.0
Colours & Coatings	171	180	16.0	13.4
Continuing Businesses	1,294	1,278	17.3	17.2
Discontinued	15	28	2.6	9.0
Corporate	(57)	(73)	n/a	n/a
<b>Total Group</b>	<b>1,252</b>	<b>1,233</b>	<b>16.1</b>	<b>16.2</b>

<sup>1</sup> Average of opening and closing net operating assets as shown in note 1 on the accounts on page 57.

<sup>2</sup> Operating profit before exceptional items and goodwill amortisation divided by average net operating assets, before net borrowings and finance leases and after writing back goodwill taken directly to reserves.

On a post tax basis the return on invested capital was 11.4% (applying the group's underlying tax rate of 29.2% to operating profit in the calculation above). The estimated

weighted average cost of capital (WACC) for the group is 8%. The margin above the cost of capital for the year was 3.4% which was the same as last year.

## Cash Flow

Johnson Matthey's net cash flow for the year was strong at £23.5 million. After taking into account £1.4 million of exchange translation, net borrowings fell by £24.9 million to £369.6 million. Gearing (net borrowings / shareholders' funds and minority interests) fell by 2.8% from 45.3% at 31st March 2004 to 42.5% at 31st March 2005.

## Net Cash Flow

	2005 £ million	2004 £ million
<b>Cash flow from operations</b>	<b>231.3</b>	259.7
Interest / tax / dividends	(124.2)	(115.4)
Capex / investment	(86.8)	(114.4)
<b>Free cash flow</b>	<b>20.3</b>	29.9
Acquisitions / disposals	19.3	(18.4)
Shares bought	(16.1)	(8.5)
<b>Net cash flow</b>	<b>23.5</b>	3.0

The group received £23.3 million from disposals and paid £4.0 million for acquisitions. The proceeds received from the disposals have been used to buy back shares. During the year we purchased 2.5 million of Johnson Matthey shares at an average price of £10.06. This included 0.9 million of shares for the group's employee share ownership trust. The cash outflow on share purchases in the year was £19.3 million, with a further £5.9 million paid in April 2005. The group received £3.2 million of proceeds from the exercise of share options by employees to give an overall net outflow on shares bought / issued in the year of £16.1 million. Excluding acquisitions, disposals and share transactions the group generated a free cash flow of £20.3 million.

Net cash flow from operations was £28.4 million lower than last year at £231.3 million. Capital expenditure incurred was £17.6 million lower than last year at £95.5 million which represented 1.4 times depreciation, down from 1.8 times last year. The net cash outflow on capital expenditure and financial investment in the year was £86.8 million, which was less than the level of capital expenditure incurred, reflecting the timing of the expenditure and the inclusion of £4.1 million received from the sale of assets.

## Capital Expenditure to Depreciation

	Year to 31st March 2005		Capex / depreciation (times)
	Capital expenditure £ million	Depreciation £ million	
Catalysts	62.4	39.2	1.6
Precious Metal Products	7.2	5.2	1.4
Pharmaceutical Materials	16.8	9.6	1.8
Colours & Coatings	6.7	10.5	0.6
Corporate / Research	2.4	2.0	1.2
<b>Total Group</b>	<b>95.5</b>	<b>66.5</b>	<b>1.4</b>

Major projects included expansion of ECT's production facilities in the UK, South Africa, Japan and China; investment in catalyst manufacturing for PCT at Clitheroe, UK; and further investment in new capacity at Macfarlan Smith in Edinburgh.

## Pensions

The surplus on the group's UK pension scheme increased by £2.5 million to £45.8 million at 31st March 2005. The investment performance of the fund for the year was good but the benefit of this was largely offset by changes in the discount rate and the inflation assumption used in valuing liabilities.

Worldwide, including provisions for the group's post-retirement healthcare schemes and pension related deferred tax assets and liabilities, the group had a net deficit of £1.1 million on retirement benefits net assets compared with a net surplus of £3.5 million at 31st March 2004.

## International Financial Reporting Standards

For the financial year ending 31st March 2006 we will be reporting our results under International Financial Reporting Standards (IFRS). On pages 80 to 84 we have set out how the group's income statement, balance sheet and segmental results for the financial year to 31st March 2005 would look under the new standards.

## Capital Structure

As discussed on page 5 our funding policy is to maintain a strong balance sheet with conservative gearing and use cash generated to invest in organic growth and bolt-on acquisitions. Gearing of 42.5% at 31st March 2005 is in line with this policy.

We expect to invest at a rate of about 1.5 times depreciation on capital expenditure over the next few years, depending on market growth. In addition we will continue to grow dividends in line with earnings growth while maintaining

cover at about two and a half times. The board is recommending to shareholders a final dividend for 2004/05 of 19.0 pence, making a total for the year of 27.7 pence, an increase of 5%, which is in line with the growth in earnings per share before exceptional items and goodwill amortisation. The dividend for the year would be covered 2.42 times by earnings before exceptional items and goodwill amortisation.

Given the strong cash flow achieved by the group, both the future capital investment and the increasing dividend can be funded out of internally generated funds. Moreover, the group should also be able to generate additional cash to finance bolt-on acquisitions. Where cash generated exceeds our investment requirements we will return the money to shareholders either in the form of share buy-backs or special dividends. In 2004/05 we purchased £25.2 million of Johnson Matthey shares and we plan to buy a similar amount in the first half of 2005/06.

## Borrowings

Since the acquisition of Syntex from ICI for £265.7 million in November 2002 net borrowings have been gradually reduced from £402.5 million at 31st March 2003 to £369.6 million at 31st March 2005. The long term debt put in place in March 2003 to finance the acquisition, comprising bonds of £40 million and US\$230 million, still has between five and ten years to run until maturity. Ten year fixed rate debt of US\$100 million issued in April 1996 now has one year left until it matures and steps will be taken during 2005/06 to refinance this borrowing.

There has been little change in the funding profile of the group during the year although the proportion of the group's gross debt held by the parent has fallen from 93% at 31st March 2004 to 76% at 31st March 2005, following the increase of £108.8 million in the debt of an overseas subsidiary to fund the repayment of an intra group loan.

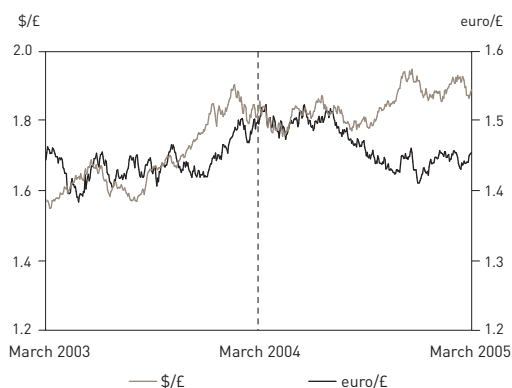
At 31st March 2005 the maturity profile of the group's debt was as follows:

## Borrowings and Finance Leases

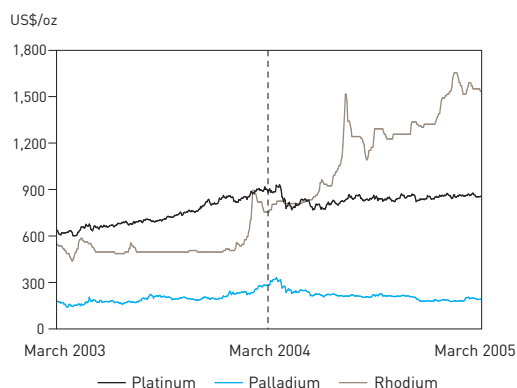
	31st March 2005		31st March 2004	
	£ million	%	£ million	%
Over ten years	–	–	111.3	22
Five to ten years	156.0	35	66.6	13
Two to five years	165.7	37	210.9	42
One to two years	89.8	20	65.7	13
Within one year	36.8	8	46.5	10
Gross borrowings	448.3	100	501.0	100
Less: cash on deposit	78.7		106.5	
<b>Net borrowings</b>	<b>369.6</b>		<b>394.5</b>	

# Operating and Financial Review

Exchange Rates



Platinum Group Metal Prices



## Financial Risk Management and Treasury Policies

The group uses financial instruments, in particular forward currency contracts and currency swaps, to manage the financial risks associated with the group's underlying business activities and the financing of those activities. The group does not undertake any trading activity in financial instruments. Our Treasury department is run as a service centre rather than a profit centre.

## Interest Rate Risk

At 31st March 2005 the group had net borrowings of £369.6 million. Some 37% of this debt is at fixed rates with an average interest rate of 5.6%. The remaining 63% of the group's net borrowings are funded on a floating rate basis. A 1% change in all interest rates would have a 1.1% impact on profit before tax, exceptional items and goodwill amortisation. This is within the range the board regards as acceptable.

## Liquidity

The group's policy on funding capacity is to ensure that we always have sufficient long term funding and committed bank facilities in place to meet foreseeable peak borrowing requirements. Johnson Matthey's borrowings generally do not exhibit large seasonal variations. In addition to long term debt of £411.5 million, the group has committed bank facilities of £290 million of which £181.9 million was drawn at 31st March 2005, down from £219.8 million at 31st March 2004 as a result of the favourable net cash flow during the year. The group also has a number of uncommitted facilities, including metal leases, and overdraft lines at its disposal.

## Foreign Currency Risk

Johnson Matthey's operations are located in 34 countries, providing global coverage. The majority of its profits are earned outside the UK with the largest single investment being in the USA. In order to protect the group's sterling balance sheet and reduce cash flow risk the group has financed most of its investment in the USA, Europe and Japan by borrowing US dollars, euros and yen respectively. Although a large element of this funding is obtained by directly borrowing the relevant currency, some is achieved through currency swaps which can be more efficient and reduce costs and credit exposure. The group uses forward exchange contracts to hedge foreign exchange exposures arising on forecast receipts and payments in foreign currencies. Currency options are occasionally used to hedge foreign exchange exposures, usually when the forecast receipt or payment amounts are uncertain. Details of the contracts outstanding on 31st March 2005 are shown on page 72.

## Precious Metal Prices

Fluctuations in precious metal prices can have a significant impact on Johnson Matthey's financial results. Our policy for all our manufacturing businesses is to limit this exposure by hedging against future price changes where such hedging can be done at acceptable cost. The group does not take material exposures on metal trading.

All the group's stocks of gold and silver are fully hedged by leasing or forward sales. Currently the majority of the group's platinum stocks are unhedged because of the lack of liquidity in the platinum market.

## Risks and Uncertainties

There are a number of potential risks and uncertainties which could have a material impact on the group's long term performance.

### Technological Change and Patents

Much of the group's business is focused on selling products which are technologically advanced or employ technologically advanced processes in their manufacture. In most cases these products are subject to continuous improvement as new technology is developed. The group is exposed to the risk that if it does not keep up with changes in the market place its products will no longer be competitive. This is both a threat and an opportunity since Johnson Matthey can gain business as well as lose it. The group's strategy to meet this risk is to invest significantly in research and development to maintain or achieve leadership positions in those markets which offer sufficient added value to justify the long term investment required.

The group's results are also impacted by the status of patents. These include patents which the group itself registers and maintains, as well as the benefits that arise from the expiry of third party patents. All the group's divisions have registered intellectual property which confers significant competitive advantage and acts as a barrier to new entrants into its markets. Pharmaceutical Materials Division supplies active pharmaceutical ingredients to generic manufacturers and can benefit when patents expire. If actual patent lives differ from the group's expectations, such as by being extended or successfully challenged, this can affect the group's results. The group has established policies both to monitor its existing patent portfolio and those of third parties, taking action if necessary to enforce any infringement.

### Legislation

Much of the stimulus for the development and growth of Johnson Matthey's products arises from new legislation governing the environmental or health impact of its customers' products in different jurisdictions worldwide. This is most significant for Environmental Catalysts and Technologies where historic and future growth depends on global tightening of emissions limits for on road and off road vehicles. Legislation is also relevant for some of the group's other businesses. Process Catalysts and Technologies manufactures products to remove contaminants or to produce particularly pure chemicals. Colour Technologies is supported by legislation phasing out lead, cadmium and other heavy metals from glass and ceramic glazes. The development of the fuel cells industry is also impacted by clean air regulations and the drive towards zero emissions within both local and national legislation.

Whilst the group has benefited considerably from the development of such legislation its growth could be adversely affected if the pace of legislative change slowed significantly. Johnson Matthey monitors the development of legislation globally and coordinates its development work to ensure it can achieve greatest advantage from each new requirement. Regular reviews are undertaken at the business and group level to monitor growth and to investigate other areas of potential if legislation slows.

### Global, Political and Economic Conditions

Johnson Matthey operates in over 30 countries around the world including several within Africa, Asia and Latin America. While benefiting from the opportunities and growth in these regions the group is exposed to the economic, political and business risks associated with such international operations. The group encounters different legal and regulatory requirements including those for taxation, environmental, operational and competitive matters. It is exposed to the effect of political risk which can include sudden changes in regulations, expropriation of assets, imposition of trade barriers and wage controls, limits on the export of currency and volatility of prices, taxes and currencies. The group is exposed to possible natural catastrophe risk, for example through major earthquake or flood, and possible terrorist action. Management monitor such risks, maintaining adequate insurance cover and amending business procedures as appropriate to mitigate any exposure while remaining in compliance with local and group requirements.

### Environmental Liabilities

The environmental laws of various jurisdictions impose actual and potential obligations on the group to remediate contaminated sites, both those currently owned and, also in some cases, those which have been sold. Johnson Matthey's environmental policies are set out on page 28. The group incurs costs annually in meeting these obligations and also maintains provisions for potential liabilities. If existing provisions are inadequate to cover any liabilities or the associated costs arising from environmental obligations this could materially impact the group's results.

### Commercial Relationships

Johnson Matthey benefits from close commercial relationships with a number of key customers and suppliers. The loss of any of these key customers or suppliers, or a significant worsening in commercial terms could have a material impact on the group's results.

Johnson Matthey devotes significant resources to supporting these relationships to ensure they continue to operate satisfactorily. From time to time the group undertakes

# Operating and Financial Review

surveys of customer satisfaction which are reviewed by the board. Some of the relationships are supported by long term contracts, notably the group's relationship with Anglo Platinum.

## Foreign Exchange

Johnson Matthey operates globally with the majority of the group's operating profit earned outside the UK. It has significant investments outside the UK with the single largest investment being in the USA. As such the group is exposed to movements in exchange rates between sterling and other world currencies, particularly the US dollar, which could adversely or positively impact results. The group's policies for managing its foreign currency exposures are set out in more detail on page 20.

## Precious Metal Prices and Controls

A large proportion of the group's activities involve managing precious metals which have inherent risks associated with them in addition to bringing valuable business opportunities.

While the group could be vulnerable to a global disruption in the supply of platinum group metals, it has access to world markets for these metals and is not dependent on any one source for obtaining supplies for operations.

Precious metals have high prices which can fluctuate significantly and this can have a material impact on Johnson Matthey's results. The group's policies for managing this risk are set out in more detail on page 20. The high value of precious metals means that any process losses could be material and there remains the possibility of theft or fraud. Johnson Matthey has extensive experience in operating with precious metals and employs strict security, assay and other process controls and reviews to minimise any exposure. Policies are reviewed regularly by the Chief Executive's Committee and reported to the Audit Committee.

## Pensions

The group's defined benefit pension funds are well funded with the main UK and US funds showing a net surplus at 31st March 2005 of £24.9 million after tax (see page 62). However, this position is exposed to the risk of changes in interest rates and the market values of investments as well as inflation and increasing longevity of the members. These risks are mitigated by paying appropriate contributions into the funds and through an investment asset allocation policy which has a high level of probability of avoiding a material deficit based on the results of an asset / liability matching study.

## Customer Market Dynamics

The group sells products to manufacturers who in turn use these products to serve a diverse range of end markets. The

group's performance is therefore impacted by the dynamics of its customers' end markets and their performance within these markets. A significant loss of market share at or by a major automotive customer could negatively impact the group's results. The group also has exposure to the wider automotive sector as a whole which is served by a number of the group's divisions. While global car production levels have some effect on the sales of Johnson Matthey's products, other factors such as tightening emissions legislation and the increasing technical demands from catalysts play a more significant role.

Another key end market is for pharmaceutical products, with Pharmaceutical Materials providing materials used in the manufacture of controlled drugs and anticancer pharmaceuticals. Johnson Matthey's performance is influenced both by growth in these markets and by the market share of its key customers.

Risks are mitigated by monitoring both industry developments and market share at customers to prevent the group from becoming unduly dependent on any single customer.

## Competitor Risk

The group operates in highly competitive markets. Significant product innovations, technical advances or the intensification of price competition could all adversely affect the group's results. Johnson Matthey invests significant resources in research and development in order to ensure the introduction of both new products and improved production processes to allow the group to be at the forefront of its chosen markets. The group also continually works to streamline its cost base to ensure it remains competitive.

## Litigation and Investigations

The group is subject to a broad range of laws, regulations and standards in each of the jurisdictions in which it operates. Failure to comply properly with these laws, regulations and standards could significantly damage the reputation and performance of Johnson Matthey.

Regular internal reviews are undertaken to assess compliance with local and group policies, and provisions are made to rectify or compensate for any breaches. In the ordinary course of business, Johnson Matthey is subject to inspections and monitoring by certain regulatory or enforcement bodies and by the quality departments of some of its major customers. If existing provisions are inadequate to cover any liabilities arising from such investigations this could materially impact the group's results.

## Energy and Raw Materials

The group's products contain a broad array of raw materials and its operations require significant levels of energy, notably electricity and natural gas. Any increases or volatility in prices and any

significant decrease in the availability of energy or raw materials could affect the group's results. Johnson Matthey coordinates its global purchasing activities to obtain the best possible prices and uses hedging and other contractual means where appropriate to minimise this risk and to benefit where possible.

### **Credit Risk**

Within certain divisions, the group derives a significant proportion of its revenue from sales to major customers. Sales to individual customers are frequently high if the value of precious metals is included in the price. The failure of any such company to honour its debts could materially impact the group's results.

Johnson Matthey derives significant benefit from trading with its large customers and manages the risk at many levels. Each business and division has a credit committee that regularly monitors its exposure. The Audit Committee receives a report every six months that details all significant credit limits, amounts due and amounts significantly overdue within the group and the relevant actions being taken. As at 31st March 2005, no single outstanding balance exceeded 1% of the group's market capitalisation.

## **Resources**

Johnson Matthey has significant resources to support its core businesses. These have been built up over many years and provide barriers to entry to new competitors in the key markets which the group serves. Johnson Matthey continues to invest in all the areas listed below to maintain its leading market positions.

### **Employees**

Johnson Matthey's most important resource is its people. We have a highly qualified workforce with many of our employees having trained in science and technology. We employ a high proportion of PhDs not only in our research centres but also in many different management positions throughout the company. Johnson Matthey has a low staff turnover (see pages 29 and 30), with many employees staying with the company for their whole careers. We place great emphasis on recruitment and training and our policies in these areas are set out on page 29.

### **Research & Development**

One of the group's strategies is to differentiate ourselves by using our world class technology. We invest significantly in research and development to develop new products and manufacturing processes. We have a group technology centre located at Sonning Common in the UK which is focused on longer term research and has a worldwide reputation for

excellence in catalysis and precious metals technology. In addition we have major research centres at Royston and Billingham in the UK located close to some of our major businesses. Worldwide we have technical centres in many countries including the US, Japan, Sweden, the Netherlands and Italy.

Johnson Matthey's R&D activities are described in more detail on pages 13 to 15.

### **Patents and Know-how**

Many of the inventions and intellectual property developed as a result of our investment in R&D are patented, and we maintain a large number of families of patents to support our businesses. Equally important is know-how where the group has an extensive knowledge base, particularly in the areas of catalysis and precious metals, which can be used to develop new products and services to meet customer needs.

### **Commercial Relationships**

Many of our businesses provide products and services to other companies and we have developed close working relationships with many of our customers and work in collaboration with them to develop new products. We also have a long standing relationship with Anglo Platinum, the world's largest platinum miner, which has lasted for many decades. Through this relationship Johnson Matthey and Anglo Platinum have developed new markets for platinum group metals which have supported the expansion of the platinum industry over many years.

### **Manufacturing Technology**

Over the last decade the group has invested heavily in new manufacturing capacity and technology. Capital expenditure has run at a high multiple of depreciation (see pages 18 and 19). As a result of this investment the group has developed an infrastructure of modern facilities located close to our major markets around the world.

### **Market Position and Reputation**

Johnson Matthey is generally ranked number one or two in the major markets in which it operates. The group is a world leader in catalysis and precious metals which provides a strong basis for future development. The company started in 1817 and has a worldwide reputation in the precious metals industry for technical expertise and integrity. Our semi-annual publication 'Platinum' is acknowledged to be the most comprehensive source of information on the platinum industry. We also publish the 'Platinum Metals Review', a leading journal of scientific research on the platinum group metals.

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## Corporate Social Responsibility

Johnson Matthey is committed to the continuing improvement of corporate social responsibility (CSR) performance and to making a positive contribution to a sustainable future through the excellence of its products, people and management practices. The company makes a significant contribution to sustainable development through the application of leading technology and its commitment to operational excellence. The company's reputation and the management of associated CSR risks is of paramount importance in protecting the interests of shareholders, employees, customers and the communities in which we have facilities.

Johnson Matthey operates according to well established ethical, social and environmental policies. Over the last year a number of initiatives have been undertaken to improve our operational performance in these areas. Details of these initiatives can be found in the Johnson Matthey corporate social responsibility report and are presented here in summary. The full report can be found on the company's website at [www.matthey.com](http://www.matthey.com).

The corporate social responsibility disclosure follows the guidelines issued by the Association of British Insurers and the format recommended by the Global Reporting Initiative has been used to guide the development of the report. As outlined in the Corporate Governance section (see page 40) the board has embedded corporate social responsibility into its risk management process. Corporate social responsibility is championed at the highest level at Johnson Matthey and the board has reviewed and endorsed the full report.

Johnson Matthey has a culture of continuous improvement in all aspects of performance. In this area improvement is driven through corporate policies, a comprehensive

management system and the commitment of our staff. There are three key policy areas which provide the framework for the management of corporate social responsibility: the Environment, Health and Safety policies; the Employment policies; and the Business Integrity and Ethics policy.

In the US this year, a compliance committee of Johnson Matthey Inc. has been formed to further the objectives of Johnson Matthey's corporate social responsibility policy of reducing the risks associated with potential breaches of business integrity, ethics and other company policies and violation of applicable laws and regulations.

### Johnson Matthey Products

Many of our products have a particularly positive social and environmental benefit. They range from anticancer compounds to our autocatalyst technologies, which improve air quality around the world. In addition, our fuel cell technologies aim to make a significant contribution to the clean generation of electricity and security of energy supply. In the management and control of emissions from heavy duty diesel (HDD) vehicles such as trucks and buses, Johnson Matthey has developed a 'tool box' of technologies. These developments offer our customers a range of solutions to respond to the new legislation coming into effect around the world from October 2005, which requires major reductions in the emissions of both particulate matter and oxides of nitrogen from HDD vehicles. Johnson Matthey's emission control technology for trucks and buses is described in further detail on pages 32 and 33.

Product safety is critical to Johnson Matthey and sophisticated systems are in place to ensure that a high level of protection is afforded to our customers.

Whilst Johnson Matthey's main contribution to sustainable development will be through the excellence of our products we also seek to achieve similar levels of excellence in the management of the business and in the quality of our manufacturing operations. Our expertise in processing valuable precious metal materials provides us with a core competence in the conservation, re-use and recycling of natural resources, principles which are applied throughout our business.

### Stakeholder Engagement

Johnson Matthey undertakes a wide range of engagement activities focused on communication with individuals and organisations who are impacted by its operations or who may impact on the Johnson Matthey business, both at corporate and divisional level. These include shareholders, fund managers, employees, customers, communities and national and international trade associations. The company plays an active role within the Chemical Industries Association (CIA) with representation on the CIA Council and other strategy boards. Johnson Matthey has also continued to play a lead role through its participation in a number of trade associations and government bodies. The company is also actively involved with national and local government to inform the development of policy in other areas where Johnson Matthey technology and products can play a pivotal role, for example, in improving air quality and facilitating the transition to a hydrogen economy.

### Environment, Health and Safety

Johnson Matthey is firmly committed to managing its activities throughout the group so as to provide the highest level of protection to the environment and to safeguard the health and safety of its employees, customers and the community.

The company's Environment, Health and Safety (EHS) policies provide the guiding principles that ensure high standards are achieved at all sites around the world and afford a means of promoting continuous improvement based on careful risk assessment and comprehensive EHS management systems. These policies, summarised in the company's policy statement (page 28) are reviewed at regular intervals. This work has given greater emphasis to formal management systems, which bring a systematic improvement in performance. Corporate policies provide a framework for all Johnson Matthey businesses to formulate site specific policies to meet local requirements.

During 2004 a comprehensive review of the group EHS management system was undertaken which generated a number of policies and guidance on new environmental, health and safety issues.

Central to this work was the adoption of progressive policies to more closely meet the changing occupational health needs of a modern workforce. As a result a new health management strategy is being implemented across the group. This involves building on the strength of existing systems to protect employee health from workplace health hazards and investing more in programmes to enhance the productivity and well-being of employees. A group EHS mental well-being policy has also been updated in recognition of this as an emerging risk factor; crucial to the welfare of employees and their contribution to successful business performance.

These policies are in the process of being communicated group wide. The policies form the bedrock of the Johnson Matthey EHS management system and provide the standards against which all EHS audits are undertaken.

EHS compliance audits are an integral part of Johnson Matthey's corporate EHS management system. 78 sites worldwide are included in the audit programme. 27 in-depth audits have been carried out in 2004/05. Formal exit interviews with local site management are a feature of the audits. Audit reports are rated as routine, important and very important. All important and very important reports are reviewed by the Chief Executive's Committee and appropriate follow up is taken on any outstanding issues. Further site visits are made by the Group Occupational Physician on a routine basis.

### ISO 14001

Over the past year continued progress has been made in the implementation of ISO 14001, in line with our target of achieving registration at all major manufacturing sites by 2010. Across the group, 53% of our staff now work at sites with ISO 14001 (an increase of 8% on 2003/04), representing some 4,127 people. Over the past year the Environmental Catalysts and Technologies business successfully completed a programme to certify all its business units to ISO 14001 and all its manufacturing sites to the international quality standard ISO/TS 16949:2002. This standard combines many aspects of quality, environmental, health and safety management under one fully integrated management system.

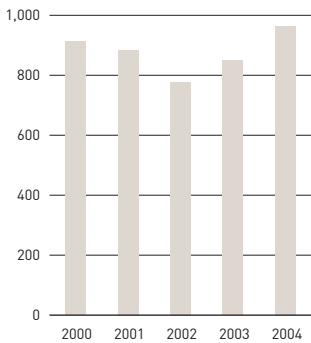
### Regulation

New regulation continues to be introduced at a considerable pace, particularly in Europe.

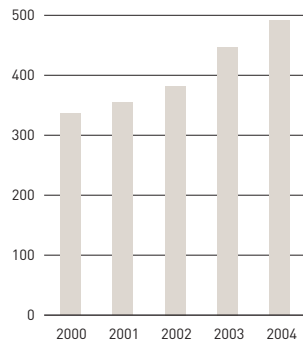
It is vital that the company continues to keep abreast of the latest developments and that the implications for the business are fully understood. Given the increasing legislative complexity, a senior manager with specific responsibility for this area was appointed during the year.

# Operating and Financial Review

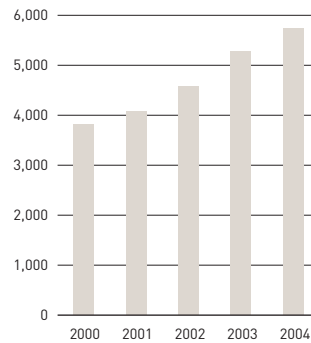
**Total Acid Gas Emissions**  
Tonnes SO<sub>2</sub> equivalent



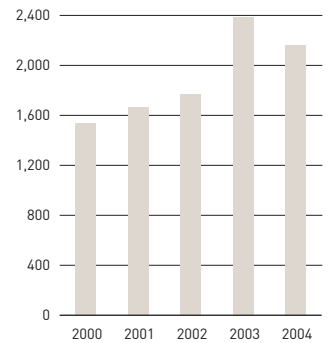
**Total Global Warming Potential**  
Tonnes CO<sub>2</sub> equivalent ('000)



**Energy Consumption**  
GJ ('000)



**Water Consumption**  
Thousands m<sup>3</sup>



REACH (Registration, Evaluation and Authorisation of Chemicals) is a current priority and the impact of the regulations and cost associated with implementation are under constant review. Relationships are being formed with other companies in the sector to ensure that the assessment and testing burden is reduced to a minimum. REACH will be implemented over a protracted time period, 12 years, and the costs to Johnson Matthey are estimated to be about £10 million over that period. Many Johnson Matthey products are below the proposed volume threshold or are outside the scope of the directive.

Johnson Matthey has participated in the Climate Change Agreements in the UK and the associated trading scheme, where carbon credits have been generated as a result of energy savings made within the business. The EU Emissions Trading Scheme was introduced in January 2005 and allocations were made for three sites within Europe, one in the UK and two in Spain. However, the UK site will remain within the UK trading scheme under the opt-out arrangements.

## Training

Training is vital to ensuring continuous improvements in environment, health and safety at all our sites. Over the past year staff of all grades have received training from the wide range of courses available, including courses on managing safely and site safety practices. A feature of the current year has been the emphasis placed on process hazard assessment training at all levels in the business. Our major sites employ environment, health and safety training specialists. Expert external trainers supplement in house capabilities where necessary.

## Environmental, Health and Safety Performance

Johnson Matthey undertakes a comprehensive annual review of group environmental performance covering all manufacturing

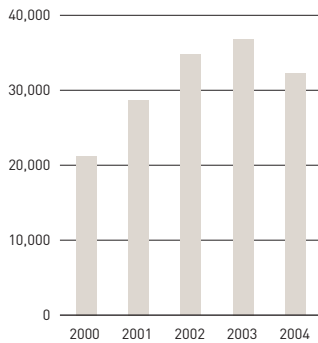
and research and development facilities. Over the last five years some of the key indicators, such as energy consumption and emissions to air, have risen. This includes the incremental effects of a number of acquisitions during the period including Macfarlan Smith and Syntex. Programmes are in place to ensure that all emissions and waste streams are minimised against a general background of business expansion. Group performance over the last five years is shown in the graphs above.

Johnson Matthey is committed to continuous improvement in all aspects of environmental, health and safety performance. Over the past year Johnson Matthey has undertaken a number of initiatives to improve performance. As with prior years this has included considerable investment in manufacturing processes where the opportunity has been taken to reduce inherent safety risks, provide improvements to planning of site health and safety actions, improve resource efficiency and introduce the latest emission abatement technology.

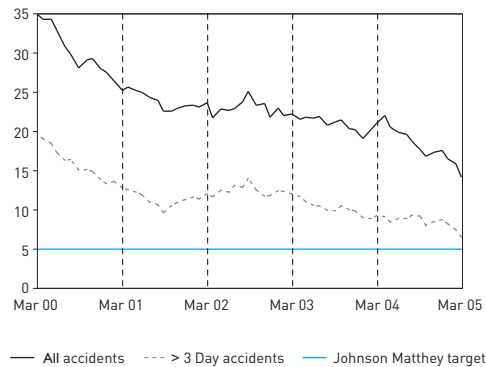
Accidents are actively monitored and detailed statistics are compiled monthly at a group level. Our performance has shown an improvement over the past year with a reduction in the incidence of greater than three day accidents from 9.22 to 6.39 per 1,000 employees per year. During the same period there was a decrease in the number of days lost per 1,000 employees from 306 to 248.

A group wide review of health and safety practices was completed during the year which examined ways to increase the rate of improvement in health and safety performance across Johnson Matthey and reduce the incidence of dangerous occurrences. As a direct result of this review the Chief Executive's Committee launched a new initiative to drive further improvements in health and safety performance. This initiative has yielded positive results, further details of which are available in the 2004/05 CSR report on the company's website at [www.matthey.com](http://www.matthey.com).

**Total Waste**  
Tonnes waste



**Annual Accident Rate per 1,000 Employees**



The Group Occupational Physician visits Johnson Matthey sites to evaluate the content, performance and standards of health surveillance and management programmes, where applicable.

All business units undertake an annual health management review and set improvement targets. Johnson Matthey ensures that all types of occupational illness conditions are identified, assessed, investigated and reported by each business unit with prevention being the primary driver of performance. The collection and validation of reliable occupational health data across the business has been problematic in the past, as it is not always possible to attribute some conditions solely to work related factors. However measures have been taken to improve the quality of data. Currently the occupational health incident rate is 6.75 per 1,000 employees per year. This includes conditions associated with mental well-being.

Johnson Matthey has continued to develop arrangements to support the prevention and management of the impact of HIV infection on the workforce of the Germiston plant in South Africa. A peer education programme has been implemented and confidential voluntary counselling and testing facilities are provided. Subsidised treatment, managed through a private health insurance scheme, is provided as a health benefit to all employees.

### Environmental, Health and Safety Targets

One of the key aims of Johnson Matthey's EHS policies is to demonstrate continuous improvement in EHS performance.

During the year and in prior years Johnson Matthey adopted corporate health and safety targets in line with the UK Health and Safety Executive (HSE) Revitalising Health and Safety Initiative for the reduction of the incidence of major injuries and working days lost as a direct result of accidents in the workplace. Performance against these targets was

referenced to health and safety performance during the year 2000 as a baseline for the group and required the following:

- Reduction in the incidence rate of major injuries by 5% by 2004 and 10% by 2010.
- Reduction in the number of working days lost by 15% by 2004 and by 30% by 2010.

The group's performance has been well in advance of these targets and the Chief Executive's Committee has decided that working to these is no longer sufficiently challenging. This performance is clearly demonstrated on the graph above which shows the marked improvement over the last few years.

The philosophy is that any accident is unacceptable and that seeking to achieve a zero accident rate should be our aspiration. In improving performance a target of achieving a group greater than three day accident rate below 5.00 per 1,000 employees per year by 2008 or earlier has been adopted. Achieving this medium term target will rely on close management control of all issues influencing health and safety.

To ensure these targets are realised further initiatives have been put in place. A fully updated version of the group EHS management system is being issued to all sites. During 2005 we will implement a new web-based accident and incident reporting system at all our major operating sites group wide. This will assist local business units with the recording and collation of monthly statistics and provide a powerful tool in the ongoing monitoring and management of health and safety across the group. Safety improvement plans, generated last year, will be strengthened and broadened to include both health and environmental risk issues. Additional multi-business seminars will be held on key risk issues.

Setting corporate targets in the aggregate is extremely difficult given the diversity of Johnson Matthey's business.

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A more effective route is to recognise the individual characteristics of each business unit and require that targets are set and achieved at this level. Typical site targets are as follows:

- Reduction in waste or emissions to air or water.
- Reduction in energy or commodity use.
- Training of a certain number of employees on EHS issues.
- Undertaking a certain number of inspection programmes.
- Reviewing a target number of risk assessments and implementing new controls.

Johnson Matthey seeks to comply fully with all environmental laws and regulations at all times and without exception. The company incurred one prosecution in 2004 resulting in a fine of £7,500 following the accidental discharge of contaminated water during decommissioning of the Meir site in the UK. The company admitted liability and cooperated fully with the Environment Agency.

## Environment, Health and Safety Policy Statement

Johnson Matthey is firmly committed to managing its activities throughout the group so as to protect the environment and safeguard the health and safety of its employees, customers and the community.

The company's Environment, Health and Safety policies have been widely disseminated and provide the guiding principles necessary to ensure that high standards are achieved at all sites around the world. They also afford a means of promoting continuous improvement based on careful risk assessment and comprehensive EHS management systems, against which sites are audited.

This policy and its associated procedures are designed to achieve the following corporate objectives:

- That all locations meet legal and group environment, health and safety requirements.
- That the manufacture and supply of products is undertaken so as to satisfy world class standards of health, safety, environmental management and resource efficiency.
- That management systems are effective in maintaining standards and fulfilling the challenge of securing continuous improvement in environmental, health and safety performance.

In order to achieve these objectives we will:

- Provide leadership and commitment as an expression of the importance that the board and the senior management team places on EHS issues.
- Ensure accountability by holding corporate management and senior executives within each operating division and business unit responsible for EHS performance.
- Provide the financial and human resources to allow EHS issues to be given an appropriate level of priority.
- Provide good communication internally and externally and encourage employee involvement and cooperation at all levels in the organisation in meeting EHS objectives.
- Ensure competence on EHS matters through education, training and awareness at all levels in the organisation, including creating an understanding of individual responsibilities for health, safety and the environment.
- Undertake assessments to identify the risks to health, safety and the environment from company operations and ensure that appropriate control measures are implemented.
- Ensure that new investments incorporate best practice and promote innovation through their design and operation to eliminate or minimise risks to health, safety and the environment.
- Investigate incidents to identify the root cause and take action to prevent recurrence.
- Promote programmes to achieve energy and resource efficiency.
- Set key corporate objectives and performance targets that can be measured and assessed, reporting results in a meaningful and transparent way both internally and externally.
- Undertake regular EHS inspections and audits of operations, and review performance, to ensure continuous improvement in EHS management.

The group EHS management system is reviewed regularly to ensure that it reflects international best practice and our growing understanding of the practical application of sustainable development.



### Human Capital Management

Johnson Matthey's people are the group's most valuable resource. We are committed to recruiting high calibre employees and providing them with the information, training and working environment they need in order to perform at the highest standards. We encourage all our employees to develop to their maximum potential and we are committed to supporting them with effective human resources policies and practices that are strategically linked to the needs of our business and our customers.

### Implementation of Johnson Matthey Human Resources Policies

Johnson Matthey people policies are implemented through the corporate human resources standards which set requirements for operations throughout the group to follow. These standards are supported by detailed regional procedures and / or business unit procedures. Policies reflect both regional best practice and local legislation. Site specific human resources policies and procedures are communicated to staff at inductions and through staff handbooks. Human resources policies and risks are examined by the Chief Executive's Committee.

### Employment Policies

#### Equal Opportunities

It is the policy of the group to recruit, train and develop employees who meet the requirements of the job, regardless of gender, ethnic origin, age, religion or sexual orientation. Disabled people and employees who become disabled are offered

employment consistent with their capabilities. The business values the diversity of its people and employment applications are welcomed from all sections of the community including minority groups.

### Training and Development of People

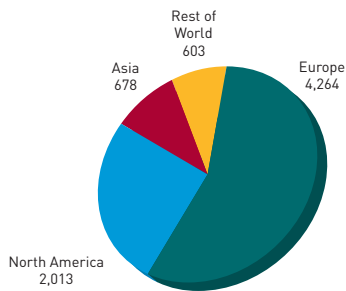
Johnson Matthey recognises the importance of recruiting the very highest calibre of employees, training them to achieve challenging standards in the performance of their jobs, and developing them to their maximum potential.

Our policy requires careful and regular reviews of organisation structure, succession planning and the development of high potential people to meet our business goals. The Management Development and Remuneration Committee of the board takes a special interest in ensuring compliance with the Training and Development of People Policy objectives to:

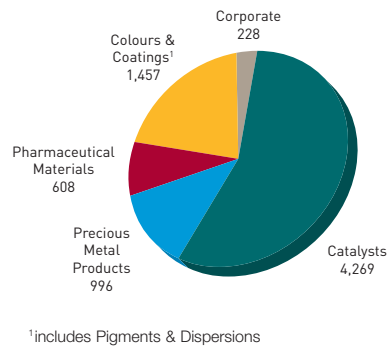
- Ensure highest standards in the recruitment of employees.
- Assess training needs in the light of job requirements.
- Ensure relevance of training and link with business goals.
- Employ and evaluate effective and efficient training methods.
- Promote from within, from high potential pools of talent.
- Understand employees' aspirations.
- Provide development opportunities to meet employees' potential and aspirations.

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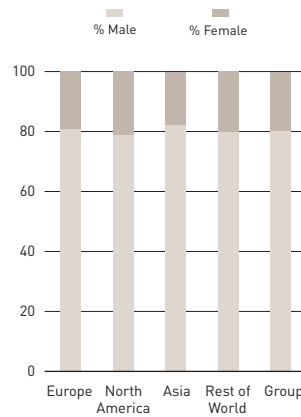
**Total Employees by Region**  
Average headcount for calendar year 2004



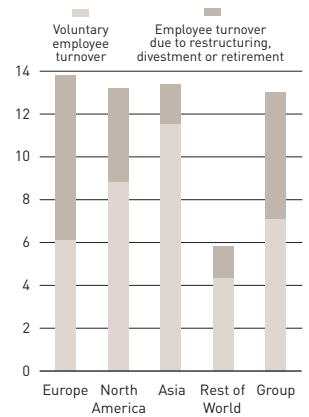
**Total Employees by Division**  
Average headcount for calendar year 2004



**Gender by Region**  
As at 31st December 2004



**Employee Turnover by Region**  
For calendar year 2004 (%)



Johnson Matthey recognises the need to maintain its ability to recruit well qualified staff to support the development of the business in new and emerging markets. This challenge will be met through appropriate manpower planning, local recruitment and the encouragement of international mobility. An increasing level of training and development activity within Asia is being established to reflect the growing importance of this region to the business.

Johnson Matthey continues to have a steady requirement for high calibre graduate recruits to meet immediate technical and commercial job needs and for development to meet future management requirements throughout the group. The combination of direct scientific contact with key university departments and a streamlined recruitment procedure ensures a reliable supply of high calibre applicants worldwide.

## Employee Relations and Communication

The quality of its employee relationships is a priority for Johnson Matthey. The company has a low voluntary staff turnover (7.1% in the calendar year 2004) with many employees staying with the company for their whole careers.

Johnson Matthey recognises the importance of effective employee communications and particularly the value of face to face dialogue. Information and comment is exchanged with employees through the company's in house magazine, regular news bulletins, presentations to staff and team briefings. Employees are also encouraged to access the company's intranet and website.

Over the last year there have been no disputes with unions that have resulted in lost time. Johnson Matthey has continued to work hard to maintain good and constructive relations with all recognised trade unions.

Johnson Matthey facilities have established procedures through which employees can raise employment related issues

for meaningful consideration and resolution. The group whistleblowing procedures provide a route for issues and concerns to be raised within the company. Protection is ensured for employees making disclosures.

The company supports employee share ownership and where practicable offers employees the opportunity to participate in share ownership plans which provide the facility to purchase company shares with a company funded matching component. Employees in eight countries worldwide are able to contribute to a company share ownership plan or a 401k approved savings investment plan. Through these ownership plans Johnson Matthey employees collectively held 1.6% of the company's shares at 31st March 2005. During the year the company's annual share matching contribution amounted to 2.1% of profit before tax, exceptional items and goodwill amortisation.

Johnson Matthey also sponsors pension plans for employees of its operations throughout the world. These pension plans are a mixture of defined benefit or defined contribution pension arrangements, savings schemes and provident funds designed to provide appropriate retirement benefits based on local laws, custom and market practice.

## Activities over the Last Year

There have been a number of key development initiatives at Johnson Matthey sites during the past year:

Improvements to employee communications have focused on the use of site satisfaction and attitude surveys as a means of strengthening and enhancing the dialogue with employees.

A particular focus of these activities has been the further development of flexible working arrangements and the promotion of employee wellness through lifestyle awareness, health education and screening programmes.

## Social and Ethical Matters

### Business Integrity and Ethics Policy Statement

A reputation for integrity has been a cornerstone of Johnson Matthey's business since Percival Norton Johnson founded it in 1817. It gives customers the confidence that the company's products meet the standards claimed for them and that they may safely entrust their own precious metals to Johnson Matthey for processing and safe keeping. Employees at all levels are required to protect Johnson Matthey's reputation for integrity.

The company strives to maintain the highest standards of ethical conduct and corporate responsibility worldwide through the application of the following principles:

- Compliance with national and international laws and regulations is required as a minimum standard.
- Reputable business practices must be applied worldwide.
- Conflicts of interest must be declared and appropriate arrangements made to ensure that those with a material interest are not involved in the decision making process.
- Improper payments of any kind are prohibited, similarly no gift whose value is material and which may be interpreted as a form of inducement should be accepted or offered by Johnson Matthey employees.
- Reporting of business performance should be undertaken in such a way that senior management is fully and properly informed concerning the business' true performance, risks and opportunities in a timely manner.
- Ethical issues must be dealt with in an efficient and transparent manner.
- A positive contribution to society as a whole, and specifically to the communities in which we operate, must be ensured.
- We must seek to influence our suppliers to operate to similar high standards as ourselves.

We support the principles set out within the United Nations Universal Declaration of Human Rights and International Labour Organisation Core Conventions.

All employees have a duty to follow the principles set out in this policy statement. It is the responsibility of directors and senior management to ensure that all employees who directly or indirectly report to them are fully aware of Johnson Matthey's policies and values in the conduct of the company's businesses. It is also the responsibility of directors and senior management to lead by example and to demonstrate the highest standards of integrity in carrying out their duties on behalf of the company. These issues are further safeguarded through corporate governance processes and monitoring by the board and sub-committees of the board.

### Supply Chains

Management of the supply chain and contractor activities is a core component of the group EHS management system. Whilst we are confident of the human rights performance of our own operations we recognise that business practices in the supply chain are not always transparent and represent a risk that must be managed.

Over the past year opportunities for integration of ethical issues into supplier assessment have been examined through the procurement process and as a direct result of this the supplier assessment documentation within a number of business units was revised to include ethical issues.

### Community Engagement Activities

Johnson Matthey is actively involved in programmes worldwide that promote good community relations to foster a relationship of understanding, trust and credibility. Guidance on site requirements is detailed in the group EHS management system.

An annual review of community engagement activities across the group has been carried out and shows that 98% of all Johnson Matthey operations with over 50 employees participate in activities within their local communities. These activities are wide ranging and include charitable giving, support for educational projects, the advancement of science and economic regeneration projects. Johnson Matthey employees also participate in activities or hold community related roles outside of the work environment. The company is supportive of this broader community engagement, allowing employees time off during working hours as appropriate.

Over the next year, community engagement activity plans at sites worldwide will be supported by further development of group guidelines and their implementation, as well as sharing of best practice. A review of site community engagement activities will be conducted once again and we will focus on how best to measure and improve the impact of our community involvement.

### Charitable Programmes

Johnson Matthey's long history of support for charitable causes is matched today through programmes at both a group and a business unit level. The causes supported are aligned to issues to which the Johnson Matthey business makes a contribution and issues on which employees are passionate.

In 2004/05, Johnson Matthey supported 37 charitable causes through its corporate annual donations programme. These included support for organisations working in the areas of arts and the environment, medical and health, science and education and social welfare. 67% of these corporate donations were in support of medical and health related causes. A total

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of 21 additional charitable causes received one-off donations through the corporate programme during the year. The company has a long association with the Royal London Society for the Blind, dating back to 1838 and continues to provide substantial support.

In the UK, Johnson Matthey continues to operate its annual Charity of the Year programme and employee views are considered when deciding on the charity. Help the Hospices was chosen as our charity of the year for 2004/05 and further details on the partnership are available in the CSR report. Johnson Matthey sites around the world also lend support to many other charities locally and nationally through donations, employee time or loans of company facilities.

In response to the Asian Tsunami disaster, Johnson Matthey has matched donations made by its employees worldwide in support of appeals for aid in the immediate aftermath of the disaster. Under this programme the company matched £35,000 in donations given by its employees, thus resulting in a combined total of £70,000. Johnson Matthey has also pledged US\$100,000 to go towards a specific reconstruction project in the affected area and is in consultation at present with major charities and contacts in the region to identify a project where our donation can do the most good.

In the financial year to 31st March 2005 Johnson Matthey donated £349,000 to charitable organisations. This figure only includes donations made by Johnson Matthey and does not include payroll giving, donations made by staff or employee time.

## Verification

The board and Audit Committee review CSR issues as part of the company's risk management processes. A review of site based environment, health and safety reporting systems forms part of the group environmental, health and safety audit programme. The board believes that the measures taken to review the CSR information provide a suitable level of confidence without external audit. Johnson Matthey utilises external specialists where specific CSR issues are identified.

## Case Study

### Cleaning Up Heavy Duty Diesels – Leading Emission Control Technology for Trucks and Buses

Diesel engines have long been dominant in heavy duty vehicle applications. They are extremely fuel efficient and thus offer major improvements in fuel economy over their petrol equivalents. Diesels are also incredibly durable, a major advantage for vehicles that often travel hundreds of thousands of miles in a year.

There is, however, growing awareness worldwide of the adverse effects of diesel exhaust emissions, especially the particulates they contain, on human health as well as their

impact on the environment. In Europe, emission standards for light duty diesel vehicles have been met by the use of diesel oxidation catalysts (DOCs) since the mid 1990s which convert harmful unburned hydrocarbons (HC) and carbon monoxide (CO) to carbon dioxide and water. DOCs also help to reduce particulate emissions by trapping and destroying some particulate on the surface of the catalyst. However, there is growing interest in the use of catalysed soot filters (CSFs) to effectively remove particulates from light duty diesel engines. This technology has already been adopted by leading vehicle manufacturers and is likely to be needed to meet future emissions standards.

## Benchmark Technology

While national HDD emissions standards have thus far not required the fitting of catalysts to trucks and buses, there has been a growing retrofit market around the world. This has resulted from local governments, city or regional authorities requiring vehicles operating in city centres to meet tougher emission standards than those that apply nationally. These local regulations have tended to focus mainly on PM emissions as these are very visible as black smoke and there is growing evidence of a correlation between particulate levels in the air and deaths from respiratory illnesses. Johnson Matthey's Continuously Regenerating Trap (CRT®) technology has been very successful in these retrofit programmes around the world and has emerged as the benchmark technology for control of HC, CO and PM emissions from HDD vehicles.

The success of the CRT® has resulted in the generation of millions of hours of operating data on a wide variety of HDD engines. This places Johnson Matthey in a very strong position to help the HDD original equipment manufacturers to meet the much tougher emissions standards coming into effect over the next few years.

## The Johnson Matthey 'Tool Box'

Control of NO<sub>x</sub> emissions from diesel engines presents some formidable challenges as diesel exhaust contains a great deal of oxygen and is thus a strongly oxidising atmosphere. While this is suited to dealing with HC and CO emissions and burning off the soot particles that are trapped in filter systems such as the CRT®, the removal of NO<sub>x</sub>, however, requires a reducing atmosphere (one containing very little oxygen). In order to achieve the reduction of all four regulated pollutants from a HDD vehicle (HC, CO, PM and NO<sub>x</sub>) it is necessary to use highly sophisticated systems. There is no one solution to fit all applications, yet Johnson Matthey has a full 'tool box' of HDD emission control technologies which will enable customers to meet continuously tightening standards, whichever approach they choose.



As outlined on page 7, it is possible to tackle NO<sub>x</sub> emissions using engine modifications including exhaust gas recirculation (EGR), where some of the exhaust is cooled and fed back into the engine to lower the engine temperature and reduce the formation of NO<sub>x</sub>. No catalysts are involved in EGR technology. The use of EGR has an impact on fuel economy, something that is critical to the economics of operating fleets of trucks and buses and it can also increase the formation of particulates. As legislation tightens, EGR can be used in combination with DOC or CRT® technology in order to meet the standards. Johnson Matthey's combination of EGR and the CRT® is known as EGRT®. This technology will reduce CO, HC and PM emissions by over 90% and NO<sub>x</sub> emissions by around 40%.

Another proven way to tackle NO<sub>x</sub> emissions is the use of selective catalytic reduction (SCR). This has been used for many years to reduce NO<sub>x</sub> emissions from stationary sources such as large generators. SCR uses catalysts to reduce NO<sub>x</sub> to nitrogen (N<sub>2</sub>) where a reducing agent (typically ammonia in the form of urea) is injected into the exhaust. A small catalyst is placed after the SCR catalyst to clean up any of the reducing agent that passes through. The use of SCR rather than EGR to control NO<sub>x</sub> on a HDD vehicle can result in more than 4% better fuel economy, a big benefit for fleet operators. However it requires the addition of an extra tank and dosing system for the reducing agent which adds cost and also requires the driver to fill up the urea tank. SCR can be used to control NO<sub>x</sub> emissions from HDD engines on its own but as legislation gets tighter it can be used in combination with the CRT® to achieve greater than 90% reductions in all four pollutants. This system, which is illustrated on the front cover, is called SCRT® and Johnson Matthey has demonstrated its effectiveness on a US long distance truck that has covered 125,000 kilometres with no loss of conversion efficiency.

As legislation continues to tighten in markets where the authorities would prefer a 'fit and forget' solution to high performance NO<sub>x</sub> control, one that does not require the vehicle operator to fill a separate additive tank, the use of NO<sub>x</sub> adsorber catalysts is an attractive solution. These are very clever catalysts, originally developed for use on gasoline direct injection and other lean burn engines, that adsorb NO<sub>x</sub> on their surface under normal diesel operating conditions and reduce that stored NO<sub>x</sub> to N<sub>2</sub> when a reducing agent, this time diesel fuel, is injected into the exhaust. This can be used in combination with a particulate trap such as a catalysed CRT® (CCRT®) to achieve greater than 90% conversion of CO, HC, PM and NO<sub>x</sub> without the need for a separate tank of reducing agent and the additional costs and operator action that this requires.

With leading technology in this area, Johnson Matthey is very well positioned to benefit from the substantial new market for HDD emission control catalysts that will develop over the next few years as a result of the continuously tightening legislation controlling the emissions of these vehicles.