

BOC GROUP PLC
Form 6-K
December 06, 2004

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 6-K

**REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934**

Report on Form 6-K dated December 6, 2004

Commission File Number 0-10906

The BOC Group plc

(Translation of registrant's name into English)

Chertsey Road, Windlesham
Surrey, GU20 6HJ England

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F: Form 40-F:

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes: No:

Enclosure: The BOC Group plc Report and Accounts 2004.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

The BOC Group plc

Date: December 6, 2004

By: /s/ Anthony Eric Isaac

Name: Anthony Eric Isaac

Title: Chief Executive

This report contains the Report and Accounts 2004 of The BOC Group plc (the Company) for the financial year ended 30 September 2004. The Report and Accounts 2004 comprises the annual report and accounts of the Company in accordance with United Kingdom requirements and the information required to be set out in the Company s annual report on Form 20-F for the financial year ended 30 September 2004 (the Form 20-F) to the Securities and Exchange Commission. This information in the Report and Accounts 2004 that is referenced in the Cross reference to Form 20-F table on page 138 shall be deemed to be filed with the Securities and Exchange Commission for all purposes, including incorporation by reference into the Company s annual report on Form 20-F filed with the Securities and Exchange Commission on 6 December 2004.

BOC

The BOC Group plc Report and accounts 2004

REPORT AND ACCOUNTS 2004

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THE BOC GROUP plc IS A PUBLIC LIMITED COMPANY LISTED ON THE LONDON AND NEW YORK STOCK EXCHANGES AND REGISTERED IN ENGLAND. THIS IS THE REPORT AND ACCOUNTS FOR THE YEAR ENDED 30 SEPTEMBER 2004. IT COMPLIES WITH UK REGULATIONS AND INCORPORATES THE ANNUAL REPORT ON FORM 20-F FOR THE SECURITIES AND EXCHANGE COMMISSION TO MEET US REGULATIONS. AN ANNUAL REVIEW AND SUMMARY FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 SEPTEMBER 2004 HAS BEEN ISSUED TO ALL SHAREHOLDERS WHO HAVE NOT ELECTED TO RECEIVE THIS REPORT AND ACCOUNTS.

Cautionary statement

The report and accounts includes forward-looking information within the meaning of section 27A of the US Securities Act of 1933 (the Securities Act), as amended, and section 21E of the US Securities Exchange Act of 1934 (the Exchange Act), as amended. Certain sections of this annual report including, without limitation, those concerning (i) the company s strategies, (ii) the company s research and product development, and information technology, (iii) the company s investments, (iv) commencement of operations of new plants and other facilities, (v) efficiencies, including cost savings, for the company resulting from business reviews and reorganisations, (vi) management s view of the general development and competition in the economies and markets in which it does, or plans to do, business, (vii) management s view of the competitiveness of its products and services, and (viii) the company s liquidity, capital resources and capital expenditure, contain certain forward-looking statements concerning the company s operation, economic performance and financial condition. Although the company believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic conditions, changes in the level of capital investment by the semiconductor industry, success of business and operating initiatives and restructuring objectives, changes in the regulatory environment, outcome of litigation, other government actions, natural phenomena such as floods and earthquakes, customer strategies and stability, and fluctuations in interest and exchange rates.

Financial year

Throughout the report and accounts, reference to 2004 in the text means the financial year ended 30 September 2004. Similarly, references to other years, eg 2005 , 2003 and 2002 , also mean the financial years to 30 September unless stated otherwise.

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FINANCIAL HIGHLIGHTS

Turnover - subsidiary companies	Operating profit	Profit before tax
2004 £3,885.4m	2004 £559.5m	2004 £412.3m
2003 £3,718.3m	2003 £438.6m	2003 £351.9m
2002 £3,657.7m	2002 £425.6m	2002 £335.3m
Turnover - including share of joint ventures and associates	Adjusted operating profit	Adjusted profit before tax
2004 £4,599.3m	2004 £576.9m	2004 £504.3m
2003 £4,323.2m	2003 £505.6m	2003 £418.9m
2002 £4,017.9m	2002 £500.1m	2002 £430.0m

Figures shown as adjusted exclude exceptional items. Other figures shown are prepared under UK Generally Accepted Accounting Principles (GAAP) and include all exceptional items.

Adjusted figures are presented to provide a more meaningful indication of underlying business performance and trends. These are the primary performance figures used by Group management.

In accordance with guidance and regulations issued by UK and US regulatory bodies, where adjusted (or non-GAAP) figures are shown, the comparable GAAP figures are also shown.

Reconciliations between the GAAP figures and the adjusted figures are shown in the operating review on pages 34 and 35, and in the Group profit and loss account on page 78. Return on capital employed is defined on page 13.

2004 RESULTS**Analysis by business****Turnover**

(including share of joint ventures and associates)	£ million	%
1. Process Gas Solutions	1,275.2	28
2. Industrial and Special Products	1,782.3	39
3. BOC Edwards	816.5	18
4. Afrox hospitals	432.1	9
5. Gist	293.2	6
Total	4,599.3	100

Adjusted operating profit

1. Process Gas Solutions	190.3	33
2. Industrial and Special Products	269.5	47
3. BOC Edwards	47.8	8
4. Afrox hospitals	59.8	11
5. Gist	25.1	4
Corporate	(15.6)	(3)
Total	576.9	100

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Financial highlights**Earnings per share**

2004
53.5p
2003 44.5p
2002 41.4p

Dividends per share

2004
40.0p
2003 39.0p
2002 38.0p

Return on capital employed

2004
14.9%
2003 10.9%
2002 10.6%

Adjusted earnings per share

2004
63.2p
2003 52.9p
2002 55.9p

Adjusted return on capital employed

2004
15.4%
2003 12.6%
2002 12.5%

Analysis by region**Turnover**

(including share of joint ventures and associates)

£ million

%

1. Europe	1,224.6	27
2. Americas	1,218.3	26
3. Africa	699.0	15
4. Asia/Pacific	1,457.4	32
Total	4,599.3	100

Adjusted operating profit

1. Europe	155.4	27
2. Americas	77.4	13
3. Africa	108.9	19
4. Asia/Pacific	235.2	41
Total	576.9	100

A reconciliation of adjusted operating profit to operating profit under UK GAAP is shown in the operating review on pages 34 and 35.

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CHAIRMAN'S STATEMENT

BUILDING FOR GROWTH AND PROFITABILITY

2004 was a good year for your company. BOC has a consistent strategy that has been well implemented – a testament to all BOC's management and staff.

Your board owns and reviews this strategy. We follow a well-defined annual process that allows all members of the board to examine every aspect of the Group's progress and opportunities. Much can be learnt by questioning and testing in the formal environment of the boardroom, but there is no substitute for seeing the strategy at work in the real world, with customers, business partners and staff. For that reason we hold two board meetings each year outside our Windlesham headquarters. We went to China in the autumn of 2003 and saw the impressive work underway in the Shanghai and Nanjing areas to develop world-scale petrochemical complexes; these are areas where BOC has established an important presence. We also spent a day with the management team of our logistics business, Gist. For our first meeting of the 2005 financial year we visited South Africa and saw the progressive economic and social developments to which our Afrox subsidiary is making a major contribution. Over the next 12 months we will also visit Poland and the US.

An important element of the strategy over recent years has been to reshape our portfolio of businesses to enhance future growth and profitability. We will continue to examine opportunities as and when they arise.

Returns to our shareholders

In 2004 BOC paid a first interim dividend of 15.5p per share in February 2004 and a second interim dividend of 24.5p per share in August, making a total of 40p for the year as a whole, an increase of 2.6 per cent on 2003. Having held the first interim dividend at 15.5p for several years, while growing the second interim dividend, we have reached our aim of a 40:60 ratio between the two interim dividends. As a result your board has decided to raise the first interim dividend by 2.6 per cent to 15.9p to be paid on 1 February 2005. In 2004 our dividends were covered 1.58 times by adjusted earnings and we look to build our dividend cover towards two-times over the medium term. We therefore aim to grow the dividend progressively, albeit at a lower rate than earnings per share growth.

Again this year, as in the two previous years, I include graphs comparing BOC's total shareholder returns since 2000 with all FTSE100 companies and with its main gases competitors. The message remains the same. We have performed well compared with other UK companies but a gap requires to be bridged with our competitors.

Total shareholder return since 1 October 2000 compared with major gases companies relative to respective local indices
Total shareholder return since 1 October 2000 compared with FTSE100 relative to FTSE100

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Chairman's statement

Corporate Governance

BOC complies with the existing Combined Code on Corporate Governance and I reported last year that we already substantially complied with the revisions to the code announced in 2003, even though we need not have done so until 2005. This is part of our continuing commitment to the highest standards of governance and integrity. Throughout BOC there is a strong commitment to the principles of ACTS – accountability, collaboration, transparency and stretch. These principles, supported by a well established Code of Conduct, provide strong safeguards at all levels of the organisation.

Corporate responsibility

Your company is well aware that it is judged not only by its financial success but also by how this financial success is achieved. How well we manage social, environmental and ethical (SEE) risks is important to the long-term health of our business. For the first time this year BOC participated in the independent survey of companies' corporate responsibility performance conducted by the UK's Business in the Community. 500 companies were invited to participate, 139 did so, including 56 from the FTSE100. BOC was ranked 25th with an aggregate score of well over 90 per cent. This was a good result and confirmed our belief that we are performing well against these measures. More recently, we have surveyed all our business units to gain a thorough understanding of how they see our SEE risks and how we are managing them. This will form the basis of our next series of initiatives.

A US subsidiary of The BOC Group, along with other companies in the welding products industry, has been the subject of injury claims based on allegations that manganese in welding fumes causes Parkinson's disease or symptoms similar to Parkinson's disease. We are not aware of any credible scientific evidence linking manganese in welding fumes to neurological damage under typical welding conditions.

Board of directors

We welcomed three new non-executive directors to our board this year. Guy Dawson joined in March. He was until 2003 chairman of European investment banking at Merrill Lynch having previously been with Morgan Grenfell and Deutsche Bank. Anne Quinn and Iain Napier were appointed in May. Anne is group vice president of BP's gas, power and renewables business stream. Iain is chief executive of Taylor Woodrow and brings previous experience of the brewing industry. Fabiola Arredondo and Roberto Mendoza resigned from the board during the year, each because of increasing demands on their time from their other commitments. Both Fabiola and Roberto have made valuable contributions to BOC for which I thank them.

In May I announced that Tony Isaac had accepted the board's invitation to continue as your chief executive until the Annual General Meeting in January 2007. We are very pleased that he will continue to provide leadership in the successful execution of our strategy.

My thanks always go first to BOC's employees around the world as they make your company what it is. It is our talented and dedicated people that make the difference in a competitive market. I thank our customers for choosing BOC. I thank all those who partner, supply and contribute to BOC wherever we do business. Finally, I thank you our

shareholders for your continuing support.

Rob Margetts Chairman

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CHIEF EXECUTIVE'S REVIEW

BOC performed strongly in 2004 in a generally favourable economic environment. Each quarter we reported adjusted operating profit and earnings significantly ahead of the equivalent period in 2003. Our two gases lines of business, Process Gas Solutions and Industrial and Special Products, saw mostly buoyant trading conditions although the strength of the rand restrained industrial activity in South Africa. Semiconductor manufacturers increased their investment this year after an extended period of reduced activity and this benefited BOC Edwards. As a result we reported adjusted operating profit for the year of £576.9 million, up 15 per cent, on turnover up nine per cent at £4,599.3 million. Adjusted profit before tax rose 20 per cent.

I explained last year that our adjusted figures eliminate exceptional items that would otherwise create distortions. Also our year-on-year comparisons are at constant currency, shorn of the effects of converting local profits into sterling. This way we show clearly how we performed in the competitive markets of the 50 or so countries where we operate. When I describe our business performance below I will do so on this basis. Our statutory results include exceptional items and reflect currency movements when comparing performance with last year. On this basis turnover increased by six per cent, operating profit by 28 per cent and profit before tax by 17 per cent.

Successful businesses

Process Gas Solutions delivered a nine per cent increase in turnover and raised adjusted operating profit by ten per cent. At the start of the year in China we and our joint venture partners announced that we would invest over US\$100 million in three schemes at Taiyuan, Suzhou and in the Pearl River region. In June 2004 we announced the setting up of a joint venture with Sinopec Shanghai Petrochemical Company Ltd (SPC). This is the second joint venture with a subsidiary of Sinopec, China's leading petrochemical company, following our agreement in 2002 with Sinopec Yangzi Petrochemical Corporation. This second joint venture intends to invest in some 3,000 tonnes a day of industrial gas production assets currently owned by SPC before embarking on building a new world-scale air separation unit. This flow of new orders means that we will double our production capacity in China by the end of 2005, with a corresponding increase in turnover. Elsewhere we were successful in winning key hydrogen orders for BP and Sunoco refineries in the US, in acquiring Duke Energy's 30 per cent ownership interest in Compañía de Nitrógeno de Cantarell, the joint venture company that owns the world's largest nitrogen complex in Mexico, and in winning the order with our joint venture partners for the largest air separation unit in Thailand. As well as supplying hydrogen for today's applications we continue to invest for the opportunities predicted for hydrogen energy in the decades to come.

Industrial and Special Products grew both turnover and adjusted operating profit by three per cent and ten per cent respectively. 2004 was the first full year of contributions from two recent acquisitions, namely Praxair's Polish gases business and Air Products' packaged gas business in Canada.

**SIGNIFICANTLY
IMPROVED
PERFORMANCE
OVER 2003**

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Chief executive's review

BOC Edwards saw the long-awaited upturn in investment by the semiconductor industry as well as increased demand from growing markets, notably flat panel displays in Asia. The result was a 27 per cent rise in turnover and a 181 per cent increase in adjusted operating profit.

Gist, our logistics business, did well to maintain turnover following the loss last year of Marks & Spencer's general merchandise business. Adjusted operating profit fell by 14 per cent, but in 2003 we included a £4.1 million gain resulting from the M&S contract termination; without this one-off payment adjusted operating profit would have been flat year on year.

Afrox hospitals continued to grow and perform well, turnover rising by nine per cent and adjusted operating profit by 16 per cent.

In November 2003 we announced that African Oxygen Limited had agreed to sell its majority shareholding in Afrox Healthcare Limited to a consortium led by two major black economic empowerment investors. We then announced in January 2004 our intention to sell our US packaged gas business, part of our north American Industrial and Special Products unit, to Airgas for up to US\$200 million. We completed the US disposal successfully in July this year while the Afrox Healthcare sale remains subject to final clearance by the competition authorities in South Africa. The motives for these two disposals were very different. In Afrox Healthcare we have a business in which we have invested successfully over recent years. The medium to long-term future for private healthcare is uncertain in South Africa and we had the opportunity to sell a highly successful business and let it develop further under new black economic empowerment ownership. Our US packaged gas business also received much attention and investment over the years, but it never fulfilled its promise. Its sale and the successful transfer of over 1,000 of our employees to the new owner is a good outcome. We retain a large presence in the US, with substantial and successful businesses that will benefit from increased management focus and a reduced overhead cost base.

The two significant joint ventures we have established in the last two years – Linde BOC Process Plants and Japan Air Gases – continue to perform well.

Cash

Operating cash flow was £758.5 million, up some eight per cent on last year, due to improved operating profit and better management of working capital. In addition, proceeds from disposals and lower levels of capital expenditure resulted in a decline in our net borrowings for the sixth successive quarter, ending the year down £405.7 million at £962.4 million. This was after paying a further £64 million into the main UK pensions scheme, an increase of £28 million over last year.

Managing to the highest standards

We continue to use our global structure to transfer best operating and commercial practice, to offer the highest standards of service to all our customers, and to meet the needs of our key customers wherever they do business in the world. Our operating procedures are supported by global programmes such as our Code of Conduct and we work hard to tap the full potential of our diverse and talented workforce.

It is important that we manage all our business risks, not just the financial ones. Operating as we do in a hazardous industry, everyone must pay the greatest attention to safety, whether it be the safety of fellow employees, of our customers and suppliers or indeed of those in the communities where we live and work. We concentrate on making safety second nature for all our employees. By managing these non-financial risks we protect our business and the reputation of BOC.

There has been one change this year to the executive management team. Greg Sedgwick returned to his native Australia to take up an appointment as chief executive of a listed building products company; I wish him well in his

future career. Mark Nichols, who had been based in Singapore, has succeeded Greg as Group director for business development. BOC is fortunate in having good people at all levels of the organisation and we place great emphasis on recruiting, developing and retaining the best people wherever we find them in the world. We have a diverse workforce and I take a personal interest in ensuring that this diversity is reflected increasingly at all levels.

I thank all employees of BOC for their hard work and for the contribution they have made to a successful year. Keeping our customers satisfied is more important than ever and we strive to deliver the same high standard of service wherever our customers choose to do business with us. We work hard to deliver the financial returns our shareholders expect. We are also well aware of the wider responsibilities we have to the economic and social life of the countries where we operate. All of this depends on the people of BOC and they respond by delivering high performance day by day.

Tony Isaac Chief executive

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BOARD OF DIRECTORS

Rob Margetts CBE np(01)

58, chairman.

Appointed chairman in January 2002. He is chairman of Legal & General Group plc, a non-executive director of Anglo American plc and chairman of the Natural Environment Research Council. Previously he was with ICI PLC for 31 years, becoming a main board director in 1992 and vice chairman in 1998. He is a fellow of both the Royal Academy of Engineering and the Institution of Chemical Engineers.

Tony Isaacnp4ê(02)

62, chief executive.

Appointed an executive director in October 1994 and became chief executive in May 2000. He was previously finance director of Arjo Wiggins Appleton plc, which he joined shortly before the demerger from BAT Industries p.l.c. in 1990. Prior to that he had been finance director of GEC Plessey Telecommunications Ltd since its formation in 1988. He is a non-executive director of International Power plc and Schlumberger Ltd.

Julie Baddeleylmp(03)

53, non-executive director.

Appointed in May 2001. She was an executive director of Woolwich plc until October 2000, responsible for e-commerce, information technology and human resources, and was previously head of change management for Maritime Region, Accenture. She is a non-executive director of the Yorkshire Building Society, the Government Pensions Group and director of four venture capital trusts. She is also an Associate Fellow of Templeton College, Oxford and a Companion of the Institute of Management. She has an MA honours degree in zoology from Oxford University.

John Bevan4ê(04)

47, chief executive, Process Gas Solutions.

Appointed an executive director in December 2002. He joined BOC in 1978 as a graduate in the Australian gases business and has held various positions in general management in Australia, Korea, Thailand and the UK. He was formerly chief executive Asia. He has a degree in commerce (marketing) from the University of New South Wales.

Andrew Bonfieldlmp(05)

42, non-executive director.

Appointed in July 2003. He is senior vice-president and chief financial officer of Bristol-Myers Squibb Company. He qualified as a chartered accountant in South Africa, working for Price Waterhouse, before joining SmithKline Beecham in 1990 and rising to become chief financial officer in 1999. He joined BG Group plc in 2001 as executive director, finance, before assuming his current role at Bristol-Myers Squibb Company in September 2002.

Guy Dawsonlmp(06)

51, non-executive director.

Appointed in March 2004. He was chairman of European investment banking at Merrill Lynch until 2003. Before joining Merrill Lynch in 1995 he held senior positions in Morgan Grenfell and Deutsche Bank. He is a partner in Tricorn, an independent corporate advisory business that he co-founded in 2003, and he is also a non-executive director of Boots Group PLC.

René Médorip4ê(07)

47, group finance director.

Appointed an executive director in July 2000. He joined BOC in 1987 and has held several finance appointments in the Group. He was appointed finance director of BOC's gases business in the Americas in 1997. Before joining BOC, he worked for Accenture and Schlumberger Ltd. He is a non-executive director of Scottish & Southern Energy plc. He is a finance graduate of the Université de Paris-Dauphine and has a doctorate degree in economics.

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Board of directors

Matthew Miaulmn(08)

58, non-executive director.

Appointed in January 2002. He is chairman of MiTAC-Synnex Group, one of Taiwan's leading high-tech industrial groups. He is also a Convenor of Civil Advisory Committee of National Information and Communications Initiatives (NICI) and on the Board of Directors of the Institute for Information Industry (III), Taiwan. He obtained a BS in electronic engineering and computer science from U.C. Berkeley, an MBA from Santa Clara University and holds an honorary doctorate degree from the National Chiao Tung University, Taiwan.

Iain Napierlmn(09)

55, non-executive director.

Appointed in May 2004. He is chief executive of Taylor Woodrow plc and a non-executive director of Imperial Tobacco Group PLC. Previously, he was chief executive of Bass Brewers, a director of Bass plc and a member of the executive management committee of Interbrew SA.

Sir Christopher O Donnellmn(10)

58, non-executive director.

Appointed in March 2001. He is chief executive of Smith & Nephew plc. Previously he held senior positions with Davy Ashmore, Vickers Limited and C R Bard Inc. He has an honours degree in mechanical engineering from Imperial College, London and an MBA from the London Business School. He is a chartered engineer and a member of the Institution of Mechanical Engineers.

Anne Quinn CBElmn(11)

53, non-executive director.

Appointed in May 2004. She is group vice president of BP's gas, power and renewables business. Previously she was managing director of BP Gas Marketing Ltd, managing director of Alliance Gas Ltd and an executive with Standard Oil of Ohio. She serves on the President's Advisory Committee to the Sloan School, Massachusetts Institute of Technology.

Dr Raj Rajagopal4ê(12)

51, chief executive, BOC Edwards.

Appointed an executive director in July 2000. He joined BOC in 1981 and has held several positions in BOC Edwards including manufacturing systems manager, director of manufacturing and managing director, being appointed chief executive in 1998. He was appointed a non-executive director of FSI International Inc in January 2001 and in June 2004 he joined the board of the business support organisation, Sussex Enterprise. He was appointed to The Council of Science and Technology in March 2004. He is a Fellow of the Royal Academy of Engineers as well as the Institution of Mechanical Engineers, the Institution of Electrical Engineers and the Chartered Management Institute. He has an MSc in manufacturing technology and a PhD in mechanical engineering both from Manchester University and an honorary degree from Cranfield University received in May 2004. He was awarded the Sir Eric Mensforth Manufacturing Gold Medal in March 2003.

John Walsh4ê(13)

49, chief executive, Industrial and Special Products.

Appointed an executive director in July 2001. He was previously president, Process Gas Solutions, north America. He joined BOC in 1986 as vice president, special gases and has held various senior management positions in the Group, including president, BOC Process Plants. He has a BA in economics from Harvard College and an MBA from

Harvard Business School.

Board committees

- l Audit committee
- m Remuneration committee
- n Nomination committee
- p Pensions committee
- 4 Executive management board
- ê Investment committee

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**EXECUTIVE
MANAGEMENT BOARD**

John Bevan (01)

47, chief executive, Process Gas Solutions since January 2003.

Appointed to the executive management board in June 2000. See page 08 for biographical details.

Nick Deeming (02)

50, group legal director and company secretary since May 2001.

Appointed to the executive management board in May 2001. He has over 17 years in-house counsel experience, including Schlumberger SEMA and Axa PPP Healthcare, specialising in corporate and commercial law. He has a degree in law from Guildhall University, an MBA from Cranfield University and qualified as a solicitor in 1980.

Stephen Dempsey (03)

53, group director, corporate relations since February 1999.

Appointed to the executive management board in October 1999. He joined BOC in 1990 as director of marketing services for the UK gases business and has held various communications roles in the Group. He has an MA in geography from Oxford University and an MBA from Cranfield University.

Peter Dew (04)

44, group director, information management since February 1998.

Appointed to the executive management board in October 1999. He joined BOC in 1986. He has held information technology roles in the Group's businesses in South Africa, the UK and most recently as information management director for the Group's businesses in Asia/Pacific.

Tony Isaac (05)

62, chief executive since May 2000.

Appointed to the executive management board in July 1996. See page 08 for biographical details.

Rob Lourey (06)

47, group human resources director since June 2000.

Appointed to the executive management board in June 2000. He joined BOC in Australia in 1996 and most recently was human resources director for Asia/Pacific. Since October 2003 he has been a non-executive director of Michael Page International PLC. He has a bachelor of business degree in personnel management.

Executive management board

Kent Masters (07)

43, president, Process Gas Solutions, north America, since July 2001.

Appointed to the executive management board in December 2002. He joined BOC in 1985 and has held positions of increasing responsibility in engineering, marketing and general management, most recently, president, BOC Process Plants. He holds an engineering degree from Georgia Institute of Technology and an MBA from New York University.

René Médori (08)

47, group finance director since June 2000.

Appointed to the executive management board in June 2000. See page 08 for biographical details.

Mark Nichols (09)

47, group director, business development since January 2004.

Appointed to the executive management board in January 2004. He joined BOC in February 1988 and held senior financial roles in the UK and US before moving into general management, most recently as managing director, Industrial and Special Products, East Asia. Before joining BOC he worked for Total Oil and Merck. He is a Fellow of the Association of Chartered Certified Accountants.

Dr Raj Rajagopal (10)

51, chief executive, BOC Edwards since June 1998.

Appointed to the executive management board in July 1996. See page 09 for biographical details.

John Walsh (11)

49, chief executive, Industrial and Special Products since June 2001.

Appointed to the executive management board in June 2000. See page 09 for biographical details.

GROUP FIVE YEAR RECORD**Turnover****Profit before tax****Adjusted profit before tax⁴**

	2000	2001	2002	2003	2004
	£ million	£ million	£ million	£ million	£ million
Profit and loss					
Turnover¹	3,579.7	3,772.9	3,657.7	3,718.3	3,885.4
Total operating profit before exceptional items ²	496.4	530.6	500.1	505.6	576.9
Exceptional items	(4.4)	(108.3)	(74.5)	(67.0)	(17.4)
Total operating profit²	492.0	422.3	425.6	438.6	559.5
Profit/(loss) on termination/disposal of businesses	12.5		(20.2)		(79.5)
Profit on disposal of fixed assets		3.6			4.9
Profit before interest	504.5	425.9	405.4	438.6	484.9
Interest on net debt	(111.5)	(123.4)	(103.1)	(96.1)	(88.4)
Interest on pension scheme liabilities	(100.7)	(107.2)	(106.1)	(110.2)	(117.4)
Expected return on pension scheme assets	149.5	166.9	139.1	119.6	133.2
Other net financing income	48.8	59.7	33.0	9.4	15.8
Profit before tax	441.8	362.2	335.3	351.9	412.3
Tax on profit on ordinary activities	(135.2)	(104.6)	(106.2)	(96.4)	(101.7)
Profit after tax	306.6	257.6	229.1	255.5	310.6
Minority interests	(28.0)	(33.5)	(26.2)	(36.4)	(46.6)
Profit for the financial year	278.6	224.1	202.9	219.1	264.0
Earnings per 25p Ordinary share					
Basic:					
on profit for the financial year	57.2p	46.0p	41.4p	44.5p	53.5p
before exceptional items	53.5p	57.5p	55.9p	52.9p	63.2p
Diluted:					
on profit for the financial year	56.9p	45.9p	41.2p	44.5p	53.5p

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before exceptional items	53.3p	57.3p	55.7p	52.9p	63.1p
Ordinary dividends per share					
3					
Actual	35.0p	37.0p	38.0p	39.0p	40.0p
Number of fully paid Ordinary shares in issue at the year end (million)	492.2	494.4	497.3	497.7	498.8

1. Subsidiary undertakings only.
 2. Including share of operating profit of joint ventures and associates.
 3. Dividends paid in the calendar year.
 4. Excludes exceptional items. A fuller explanation of the term adjusted , and the reasons for presenting such a measure, is given in the operating review on pages 34 and 35. A reconciliation of adjusted profit before tax to profit before tax is given in the profit and loss account on page 78. A reconciliation of adjusted return on capital employed to return on capital employed is given in the operating review on page 35.
- All turnover and operating profit arose from continuing operations.

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Group five year record**Capital employed****Capital expenditure**

	2000 (restated) £ million	2001 (restated) £ million	2002 (restated) £ million	2003 (restated) £ million	2004 £ million
Balance sheet					
Fixed assets					
intangible assets	49.2	48.1	150.7	206.1	174.9
tangible assets	3,294.0	3,168.6	3,027.4	2,913.4	2,618.4
joint ventures, associates and other investments	395.8	390.3	426.1	608.6	548.2
Working capital (excluding bank balances and short-term loans)	282.8	257.0	203.1	220.1	154.5
Deferred tax provisions	(295.8)	(294.3)	(291.8)	(279.2)	(253.0)
Other non current liabilities and provisions	(181.4)	(184.3)	(173.7)	(145.8)	(126.9)
Net borrowings and finance leases	(1,308.4)	(1,272.1)	(1,325.6)	(1,368.1)	(962.4)
Net assets excluding pension assets and liabilities	2,236.2	2,113.3	2,016.2	2,155.1	2,153.7
Pension assets ⁵	402.0	107.0	54.3	50.7	68.9
Pension liabilities ⁵	(31.1)	(56.0)	(311.0)	(341.8)	(344.5)
Net assets including pension assets and liabilities	2,607.1	2,164.3	1,759.5	1,864.0	1,878.1
Shareholders' capital and reserves	2,333.5	2,026.7	1,641.6	1,686.7	1,675.3
Minority shareholders' interests	273.6	137.6	117.9	177.3	202.8
Total capital and reserves	2,607.1	2,164.3	1,759.5	1,864.0	1,878.1
Other selected financial information					
Capital employed⁶					
Total capital and reserves	2,607.1	2,164.3	1,759.5	1,864.0	1,878.1
Non current liabilities and provisions	477.2	478.6	465.5	425.0	379.9
Net borrowings and finance leases ⁷	1,308.4	1,272.1	1,325.6	1,368.1	962.4
	4,392.7	3,915.0	3,550.6	3,657.1	3,220.4
Total assets	5,557.8	5,000.5	4,904.9	4,883.7	4,665.7

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Long-term liabilities and provisions	1,399.0	1,554.5	1,897.5	1,851.5	1,652.9
Capital expenditure ¹	413.7	352.6	354.3	281.2	256.1
Depreciation and amortisation ¹	313.3	329.5	330.9	333.4	324.0
Employees					
UK	9,929	10,597	11,266	10,414	10,682
Overseas	32,780	32,574	35,014	34,093	32,701
Continuing operations	42,709	43,171	46,280	44,507	43,383
Ratios					
Return on capital employed ⁸	12.6%	10.4%	10.6%	10.9%	14.9%
Adjusted return on capital employed ^{4,9}	12.7%	13.1%	12.5%	12.6%	15.4%
Net debt/capital employed	29.8%	32.5%	37.3%	37.4%	29.9%
Net debt/equity	50.2%	58.8%	75.3%	73.4%	51.2%

5. Pension assets represents the excess of pension assets over pension liabilities in countries where pension assets exceed pension liabilities. Pension liabilities represents the excess of pension liabilities over pension assets in countries where pension liabilities exceed pension assets.
6. As defined in note 1 b) to the financial statements.
7. Analysed for 2004 and 2003 in note 20 to the financial statements.
8. Operating profit as a percentage of the average capital employed excluding net pension liabilities. The average is calculated on a monthly basis.
9. Operating profit before exceptional items as a percentage of the average capital employed excluding net pension liabilities. The average is calculated on a monthly basis.

Information for years 2000 to 2003 has been restated to be on a comparable basis with 2004 following the application of UITF37 and UITF38 in 2004, as explained on page 83.

GROUP PROFILE

Introduction

The BOC Group began its business life over 100 years ago as the Brin's Oxygen Company. The company was incorporated in England in 1886 and adopted its present name on 1 March 1982.

A technology to extract oxygen from the air in commercial quantities had just been developed and in 1886 the Brin brothers started production at a factory in Westminster, London. Two uses had already been found for oxygen. One was to intensify limelight, which was then used in theatres. The other was to assist patients breathing during and after surgery. New technology was soon developed that allowed air to be separated into all its major components - nitrogen, oxygen and argon. By 1960, industrial gases were in widespread use and BOC's business was firmly established. Tonnage plants were supplying steelworks with oxygen and the customer base had been broadened to extend from metal cutting and welding to food and medicine. The business had also spread overseas with subsidiaries or associated companies as far away as Australia and South Africa. During the 1980s, BOC's South African subsidiary began to invest in private hospitals. This diversification was the basis of the current Afrox hospitals segment.

BOC acquired the vacuum equipment company Edwards High Vacuum International Limited in 1968 and this formed the basis of what was to become the BOC Edwards line of business today.

The BOC Distribution Services business (now called Gist) was first established in 1970, initially providing a chilled food distribution service for Marks & Spencer and relying upon distribution skills and liquid nitrogen chilling technology, acquired as a result of BOC's involvement in gases.

In 1978, BOC completed the acquisition of Airco Inc in America, a predominantly gases business that doubled the Group's size and brought BOC for the first time into the US gases market. In the period from 1970 to 1990 The BOC Group significantly increased its presence in the Asia/Pacific region through participation in several joint ventures or associated companies. BOC established strong market positions in Thailand, Indonesia, Taiwan, the Philippines, China and Korea.

An investment in 1982 gave BOC effective management control of the Japanese gases company Osaka Sanso Kogyo KK (OSK). Conversion of loan stock and subsequent purchases of shares raised BOC's holding in OSK to 97 per cent. In September 2002 BOC and Air Liquide announced a conditional agreement to merge their industrial and medical gases businesses in Japan. The merger became effective in January 2003 and BOC's subsidiary in Japan has retained a 45 per cent interest in the joint venture company called Japan Air Gases Ltd. In the period from 1998 to 2001, BOC increased investments in its gases companies in Thailand, Indonesia and the Philippines by acquiring the interests of joint venture partners or minority shareholders.

The BOC Group has an international portfolio of companies operating as three lines of business. These are Process Gas Solutions (PGS), Industrial and Special Products (ISP) and BOC Edwards. In addition there are two separately managed specialist businesses, Afrox hospitals and Gist. Operating results are reported separately for these five segments.

The main exports of the Group in 2004 were special products from the UK, helium from the US and vacuum equipment and semiconductor manufacturing equipment from the UK, the US and Japan. Trade between Group undertakings is conducted at fair market prices.

Although BOC Process Plants was combined with Linde Engineering in the US with effect from September 2002, BOC retains an interest in the manufacture of industrial gas equipment through its Cryostar business based in France. Cryostar makes specialist cryogenic pumps and expansion turbines that are used by most manufacturers of industrial gas plant. In recent years Cryostar has also developed a strong position in the market for shipboard compressors and heat exchangers used aboard liquefied natural gas (LNG) tankers. Management believes that Cryostar is the leading manufacturer of its product range worldwide.

Analysis of results by business

(including share of joint ventures and associates)

	Turnover		Operating profit		Adjusted operating profit	
	£ million	%	£ million	%	£ million	%
Process Gas Solutions	1,275.2	28	189.5	34	190.3	33
Industrial and Special Products	1,782.3	39	253.9	45	269.5	47
BOC Edwards	816.5	18	46.8	8	47.8	8
Afrox hospitals	432.1	9	59.8	11	59.8	11
Gist	293.2	6	25.1	5	25.1	4
Corporate			(15.6)	(3)	(15.6)	(3)
	4,599.3	100	559.5	100	576.9	100

Adjusted operating profit excludes exceptional items. See also pages 34 and 35 of the operating review.

The BOC Group contributes to the economies of some 50 countries throughout the world. The UK is the largest single source of sales revenue for the Group's products and services, followed by the US. Other major geographic areas for the Group are Australia, South Africa, Japan and other markets in the Asia/Pacific region. The business therefore operates from a broad geographical base with local manufacturing in most of the key overseas markets.

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Group profile

Analysis of results by region

(including share of joint ventures and associates)

	Turnover		Operating profit		Adjusted operating profit	
	£ million	%	£ million	%	£ million	%
Europe	1,224.6	27	155.4	28	155.4	27
Americas	1,218.3	26	62.6	11	77.4	13
Africa	699.0	15	108.9	19	108.9	19
Asia/Pacific	1,457.4	32	232.6	42	235.2	41
	4,599.3	100	559.5	100	576.9	100

Adjusted operating profit excludes exceptional items. See also pages 34 and 35 of the operating review.

The UK accounts for the largest part of the Group's activities in Europe but BOC has significant gases subsidiaries in Ireland and Poland, vacuum products manufacturing in France and a pharmaceutical packaging machinery operation in the Netherlands.

Gist, BOC's supply chain solutions business, operates principally in the UK but also has operations in other countries.

Subsidiaries in the US are engaged in the Group's three lines of business. The Group's other principal subsidiaries, joint ventures and associates in the Americas are located in Canada, Venezuela, Colombia, Chile and Mexico.

The largest Group subsidiary in Africa is African Oxygen Limited (Afrox), a South African public company in which the Group owns 56 per cent of the equity. The largest shareholder, other than BOC, holds less than 15 per cent of the equity. Afrox, primarily through wholly-owned subsidiaries, is engaged in the manufacture and sale of products within the PGS and ISP lines of business. Afrox also has interests in private hospitals, clinics and other health care services in southern Africa, primarily through its 69 per cent holding in Afrox Healthcare Limited.

There are other Group or Afrox subsidiary companies in Africa located in Botswana, Kenya, Malawi, Mozambique, Namibia, Nigeria, Swaziland, Zambia and Zimbabwe. These companies are engaged primarily in the manufacture and/or sale of products in the ISP line of business.

BOC has businesses in most of the Asia/Pacific markets, including Japan, Korea, Thailand, Taiwan, Indonesia, Malaysia, Singapore, China, the Philippines, India, Pakistan, Bangladesh, Australia and New Zealand. In Australia, the Group's business is conducted by BOC Limited. This company, as well as its subsidiaries, joint ventures or associates, is engaged in the manufacture and sale of products in the PGS and ISP lines of business. BOC participates in the liquefied petroleum gas market in Australia through a 50 per cent shareholding in Elgas Limited. Elsewhere in the Pacific region, the Group conducts its business through subsidiaries, joint ventures and associated companies.

Management organisation

BOC's management structure is based on three global lines of business and two specialist businesses. Each line of business serves a clearly defined type of customer and each pursues its own strategy for growth and performance at a local level. The organisation is designed to maximise BOC's global as well as local strengths. The lines of business have global responsibility to set strategy and prioritise investment. They include operational business units and these

local units are responsible to the Group chief executive for delivering financial, safety and operational performance. The business units contribute to the development of the strategies of the lines of business and customise and implement them in local markets. The business unit heads collaborate in order to share best practice and to maximise growth and profit opportunities wherever they may appear.

Process Gas Solutions (PGS) manages all aspects of BOC's business with customers requiring bulk supplies of industrial gases from on-site plants or by pipeline as well as deliveries of liquefied gases. Typical customers are found in the oil and chemicals, food and beverage, metals, and glass sectors all round the world. Marketing, business development and the execution of investments to provide customer specific solutions for the supply of industrial gases are handled by Process Systems, which forms part of PGS. Until 2002, Process Plants, another unit forming part of PGS, was responsible for supplying air separation technology within the Group with plants of its own design or acquired from alliance partners and others. In March 2002 BOC announced plans to merge its Process Plants operations with Linde Engineering in the US to form a new company, Linde BOC Process Plants LLC. The transaction was completed just before the end of 2002. BOC owns 30 per cent of the combined company and Linde Engineering has become the principal supplier of industrial gases plant to BOC worldwide.

Industrial and Special Products (ISP) covers BOC's business with customers in the fabrication, medical and leisure sectors as well as the special products and liquefied petroleum gases businesses.

BOC Edwards embraces all aspects of business with semiconductor industry customers worldwide including the supply of bulk gases and electronic materials, vacuum and abatement technology, chemical management systems and semiconductor-related services. BOC Edwards also serves general vacuum markets around the world and manufactures pharmaceutical freeze-drying and packaging machinery.

Group profile

The segment reporting as Afrox hospitals operates through Afrox Healthcare Limited, which is quoted on the Johannesburg Stock Exchange. It owns and manages private hospitals and clinics in southern Africa. Additional services include a direct medicines service for chronic medication, occupational health services, nursing training, pharmacy management and laboratory services. BOC's majority-owned subsidiary, African Oxygen Limited (Afrox), holds 69 per cent of Afrox Healthcare Limited (AHealth). In July 2003 Afrox announced that it was in the process of considering its strategic options with regard to its shareholding in AHealth. On 17 November 2003, Afrox announced that it had agreed to sell its entire holding in AHealth to a consortium led by two major black economic empowerment investors. The sale remains subject to approval by the South African Competition Tribunal, at which closing hearings are currently scheduled for March 2005. In addition an application has been brought in the South African High Court by two shareholders in Afrox Healthcare Limited to have the Scheme of Arrangement, by which the disposal would be implemented, declared to have lapsed. This application, which is being opposed, is currently due to be heard in the week commencing 29 November 2004.

During 2001, BOC Distribution Services was re-named Gist to reflect the changing nature of its business. Gist operates as a separate business unit outside the lines of business structure. It remains focused on developing business with major customers, including Marks & Spencer, and has developed capability in supply chain consultancy and end-to-end supply chain solutions.

Corporate development

Over the last three years BOC has continued to invest in its core businesses at the same time as divesting assets and businesses that were no longer consistent with its strategy.

As a result of a successful tender offer, BOC increased its shareholding in Osaka Sanso Kogyo KK (OSK) in Japan from approximately 55 per cent to over 93 per cent with effect from 8 May 2001. The holding was further increased during 2002 to 97 per cent. In September 2002 BOC and Air Liquide announced a conditional agreement to merge their industrial and medical gases businesses in Japan. The merger became effective in January 2003 and BOC's subsidiary in Japan has retained a 45 per cent interest in the combined company called Japan Air Gases Ltd. In June 2001, BOC increased its holding in Thai Industrial Gases Public Company Limited (TIG) from approximately 60 per cent to over 90 per cent and launched a tender offer for the outstanding shares leading to 99 per cent ownership.

In October 2001 BOC Edwards agreed terms for the acquisition of the vacuum and pressure business of the Smiths Group. These businesses are located in the UK, north America and continental Europe and typically serve customers in the metallurgy, water treatment, food, power and chemical industries.

Hydromatix and Semco were also acquired during 2002 with the intention of positioning BOC Edwards in those market segments expected to deliver the fastest growth. These two companies, based in the US, are involved principally in semiconductor wet processing technology including chemical blending delivery and collection systems as well as liquid waste abatement systems.

BOC Edwards sold its glass coating business, based in the US, in April 2002 but retained its Temescal business that supplies technology for compound semiconductor manufacturing.

The acquisition of the turbomolecular pumps business from Seiko Instruments Inc in Japan was announced in February 2002 and completed in March 2002 with the principal objective of enhancing the ability of BOC Edwards to develop vacuum sub-systems to satisfy the growing trend to on-tool pumping in the semiconductor industry.

In April 2002 BOC purchased Matheson Gas Products Canada Inc, thereby adding an important special products capability to BOC's Industrial and Special Products range in Canada.

In May 2002 BOC acquired Unique Gas and Petrochemicals Public Company Limited (UGP), in Thailand. UGP is a leading supplier of liquefied petroleum gas (LPG) and packaged ammonia in the industrial and special products

markets.

In March 2002 BOC announced plans to merge its Process Plants operations with Linde Engineering in the US to form a new company, Linde BOC Process Plants LLC. The transaction was completed at the end of September 2002. BOC owns 30 per cent of the combined company and Linde Engineering has become the principal supplier of industrial gases plant to BOC worldwide.

BOC's associated company in Malaysia acquired 35.6 per cent of the gases company Nissan Industrial Oxygen Inc (NIOI) in March 2002 and increased its holding to 100 per cent in September 2002 following a tender offer. Each of BOC's three lines of business has absorbed a part of NIOI.

At the end of August 2002, BOC announced an agreement to purchase Praxair's Polish gases business. The transaction was completed at the end of January 2003 following approval by the Polish competition authority. The business acquired includes a high proportion of industrial and special products sales.

In October 2002, BOC acquired Environmental Management Corporation (EMC), a privately owned water services company based in St Louis, Missouri. EMC manages water and wastewater treatment facilities for both industrial and local municipal customers around the US. EMC forms part of the PGS line of business, which intends to expand the range of solutions offered to its industrial customer base.

At the end of January 2003, BOC acquired the partial oxidation syngas plant at Clear Lake, Texas, from Celanese. Under the agreement BOC fulfils a significant proportion of the industrial gas requirements for the Celanese chemical facility at Clear Lake.

In March 2003 BOC announced an agreement to purchase the Canadian packaged gas and related welding equipment business of Air Products. The acquisition was completed in April 2003 following approval from the Canadian regulatory authority.

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Group profile

In June 2003, BOC announced an agreement to obtain half the output of a new helium extraction facility to be constructed in Qatar. Deliveries from the new source are scheduled to commence in July 2005.

Following a strategic review of its investment, African Oxygen Limited (Afrox) announced on 17 November 2003 that it had agreed to sell its majority shareholding in Afrox Healthcare Limited to a consortium led by two major black economic empowerment investors in South Africa. The sale remains subject to approval by the South African Competition Tribunal, at which closing hearings are currently scheduled for March 2005. In addition an application has been brought in the South African High Court by two shareholders in Afrox Healthcare Limited to have the Scheme of Arrangement, by which the disposal would be implemented, declared to have lapsed. This application, which is being opposed, is currently due to be heard in the week commencing 29 November 2004.

On 27 January 2004, BOC announced that it intended to dispose of part of its US Industrial and Special Products business to Airgas Inc. The transaction was completed on 30 July 2004. The initial consideration was US\$175 million in cash with up to a further US\$25 million to be paid on or about 15 November 2005 subject to certain conditions.

In May 2004 BOC agreed to buy Duke Energy's 30 per cent ownership interest in the Cantarell joint venture company for US\$59.7 million in cash. This increased BOC's overall stake to 65 per cent on completion in September 2004. This company supplies Pemex with nitrogen for the pressurisation of its oilfields in the Gulf of Mexico.

Industrial gases

The BOC Group is one of the major producers of industrial gases in the world. Its products include the atmospheric gases (nitrogen, oxygen and argon) produced by air separation plants as well as hydrogen, carbon monoxide and syngas (a mixture of hydrogen and carbon monoxide) made by technologies including steam-reforming or partial oxidation of hydrocarbons. The Group also markets carbon dioxide, helium and liquefied petroleum gas. These are generally derived as by-products from chemical processes or from natural sources and are also purchased from other producers. In addition, the Group markets dissolved acetylene and a wide range of special gases, medical gases, gas mixtures and gaseous chemicals.

Industry structure and consolidation The industrial gases business is capital-intensive, with increasing demand, together with economies of scale, leading to the need for large production units and distribution networks. The need for fixed asset investments, the trend towards global customers and the benefits from the transfer of applications technology worldwide have resulted in the business being handled by a relatively small number of companies internationally.

One or more other major international producers compete in each of the industrial gases markets served by the Group, and in many of the markets there are smaller local producers as well. International competitors include Air Liquide, Praxair, Air Products and Chemicals, Linde, Airgas and Nippon Sanso. The world market for gases and related products is estimated to be over £20 billion a year.

On 13 July 1999 the board of The BOC Group agreed the terms of a pre-conditional cash offer at £14.60 per share to be made jointly by Air Liquide and Air Products. Making the offer was conditional upon those companies obtaining satisfactory regulatory clearances in Europe, Canada and the US by 13 March 2000. Following an extension to the pre-conditional offer period to conclude discussions with the Federal Trade Commission (FTC) in the US, the bidders allowed the offer to lapse on 10 May 2000.

Principal industrial gas products Nitrogen possesses two key characteristics that make it the world's most widely used and versatile industrial gas. Nitrogen is almost inert and when liquefied it is intensely cold. This makes liquid nitrogen a highly effective, versatile and non-polluting agent for freezing and chilling.

Under normal conditions nitrogen is chemically inactive. This makes it an important purging and blanketing gas in the chemical and refining industry as well as in the electronics industry.

Oxygen, in contrast to nitrogen, is useful for its reactivity. It supports combustion and it supports life. Oxygen has been used in welding and medicine for over 100 years and in steel production since the 1950s.

Iron and steel producers use oxygen to accelerate melting and to improve metal quality during the refining process. It is also used by the oil and chemicals industries and many others for a variety of oxidation processes. Mixed with fuel gases, oxygen provides a heat source for many welding, cutting and metal fabrication processes.

Argon makes up less than one per cent of the atmosphere but it is the most abundant truly inert gas. It is used to provide a shielding atmosphere in welding, metal fabrication, aluminium processing, microelectronics, glass coating, advanced ceramics and other industrial processes. It is also used in the steel industry, principally in the production of stainless steel.

Hydrogen is typically produced by steam reforming or partial oxidation of natural gas, petroleum gas, or liquid or solid hydrocarbon feedstocks. Hydrogen may also be recovered from by-products purchased by BOC from external suppliers. Hydrogen is used primarily in the oil and chemicals industries for applications aimed at upgrading crude oil through hydrocracking to form lighter fractions and to remove sulphur in the production of cleaner fuels. The chemicals industry also uses hydrogen where it is required as an active ingredient in many large-scale processes.

Helium is extracted from natural gas deposits. Only a few sources in the world contain a sufficient proportion of helium to justify its separation. The Group's supplies now come from the US, Poland and Russia and are secured by long-term contracts. In June 2003, BOC announced an agreement to obtain half the output from a new helium extraction facility to be constructed in Qatar. Deliveries from this new source are expected to begin in July 2005. Because of its high value, helium is the only major industrial gas to be extensively traded internationally. Helium is used in welding, leak detection, hospital MRI scanners and in the production of optical fibres. Helium gas mixtures are used in balloons.

Group profile

Carbon dioxide supplied by BOC is obtained as a by-product from other companies' manufacturing processes, from natural sources or recovered in the generation process for hydrogen or syngas and put to constructive use. Solid carbon dioxide is, like liquid nitrogen, used for chilling and freezing in the food industry. As a gas it is used to carbonate and dispense beverages of all kinds.

Acetylene is normally supplied in cylinders and used together with oxygen in metal cutting and welding applications. BOC is a major manufacturer of dissolved acetylene.

Liquefied petroleum gas (LPG) is a fuel gas with a wide variety of domestic, industrial and transport applications. BOC is a major distributor of LPG in South Africa and Thailand, and its joint venture company Elgas Limited is a major distributor in Australia. BOC has smaller market positions in several other countries.

Production of industrial gases Oxygen was first extracted from the atmosphere by a chemical process. This was superseded over 80 years ago by the cryogenic (low temperature) process involving the liquefaction and distillation of air. The cryogenic process is still by far the most widely used, but non-cryogenic techniques (pressure swing adsorption and membrane diffusion), which were first developed during the 1970s, are becoming increasingly significant for smaller or less demanding on-site applications.

Cryogenic air separation is a mature and stable technology, although incremental technical advances are still yielding improvements in capital cost, operating cost, ease of operation and reliability. The only significant raw material, apart from the air itself, is electricity, which is used in large quantities to drive compressors, pumps and other equipment. The production process in modern air separation plants is highly automated, and remote operation of BOC's plants from control centres is becoming increasingly common.

The production of hydrogen and syngas uses steam reforming or partial oxidation of hydrocarbon feedstocks such as natural gas, petroleum or coal to separate the hydrogen and carbon compounds. The choice of feedstock is related to their prices in local markets.

Distribution of industrial gases Industrial gases may be supplied to customers in a variety of ways; through pipelines from on-site or nearby cryogenic or non-cryogenic plants, by deliveries of liquefied gases in road or rail tankers, in portable cryogenic containers or in cylinders (also called compressed or packaged gases).

Distribution is an important competitive factor in the industrial gases business and the methods of distribution vary according to the nature of the products themselves and the customer's volume requirements. Most gases have to be stored and distributed either under great pressure, which requires them to be carried in heavy and bulky cylinders, or at extremely low temperatures in specially insulated tankers, which limits how far they can be transported before carriage costs become unacceptable. Pipeline delivery involves high capital costs and the routing is inflexible. As a result, there is little international trade in industrial gases. Production has to occur in or near the market being served and there is a trend towards production at customers' own sites.

Business segments

The BOC Group reports financial results for the three lines of business and for Afrox hospitals and Gist separately.

Process Gas Solutions (PGS)

This line of business covers BOC's business with larger-scale industrial customers worldwide, typically in the oil and chemicals, food and beverage, metals, and glass sectors. Gases and services are supplied as part of customer-specific solutions that create the most value for customers at the lowest cost to BOC. These range from supply by pipeline or from dedicated on-site plants to the largest users, to supply by road tanker in liquefied form to others.

Tonnage (pipeline) customers are usually supplied on the basis of long-term contracts, typically containing a fixed facility charge together with a variable charge for product supplied in excess of a set minimum quantity. Revenues from these contracts thus have a measure of stability with respect to changes in demand for product. Tonnage plants are often built to produce merchant gases in addition to those required by the tonnage customer and these gases can be sold to other customers. The BOC Group has substantial positions in the tonnage markets of the UK, the US, Australia, South Africa and Asia as well as in some smaller markets. The products supplied to tonnage customers have traditionally been the atmospheric gases oxygen, nitrogen and argon. More recently, hydrogen and syngas are becoming significant tonnage products as are associated utilities including steam and power.

The delivery of liquefied gases by road or rail to the customer's site is normally limited by transport costs to a radius of about 200 miles. Product for this market is supplied either from merchant plants or from tonnage plants incorporating liquefiers. Larger users are typically supplied with product in liquid form delivered in cryogenic tankers into special storage vessels installed at customer premises. Tankers and vessels are often BOC Group owned. Liquefied gases are usually supplied on the basis of contracts with terms of one to five years. Revenues are generally based upon the actual quantity of gas consumed, with an additional fixed charge for the use of storage equipment.

The growth of sales and profit in this line of business is driven by investment in new production facilities. Such investment is predominantly the result of opportunities to satisfy long-term supply contracts with one or more heavy industrial customers for each plant.

Marketing, business development and the execution of investments to provide customer-specific solutions for the supply of industrial gases are handled by Process Systems, which forms part of PGS.

Group profile

Business development A plant to supply OneSteel at Whyalla in South Australia was commissioned in November 2001 also replacing and increasing capacity over previous and less efficient merchant plants in Adelaide. Shortly afterwards in January 2002 a new plant began supplying Huntsman on Teesside in the UK with hydrogen to be used for the production of aniline.

In April 2002, BOC established a joint venture in Nanjing with Yangtze Petrochemical Corporation (YPC), which is a subsidiary of Sinopec, China's leading petrochemical company. BOC purchased existing air separation assets with effect from May 2002 and construction of new air separation capacity is almost complete. BOC's joint venture will be a supplier to a new BASF and YPC joint venture plant also under construction and scheduled to begin production in 2005. Additional liquefaction capacity was added to the existing air separation facility during 2003. These investments give BOC a strategic position as a key supplier in the Nanjing area, which is being developed through foreign investment as a leading centre for chemical production in China.

In the US a new plant began to supply WCI Steel in Ohio in May 2002 and a plant at Midland, North Carolina, began production in June 2002.

The merger of BOC Process Plants operations with Linde Engineering in the US to form a new company, Linde BOC Process Plants LLC was completed at the end of September 2002. BOC owns 30 per cent of the combined company and Linde Engineering has become the principal supplier of industrial gases plant to BOC worldwide.

In October 2002, BOC acquired Environmental Management Corporation (EMC), a privately owned water services company based in St Louis, Missouri. EMC manages water and wastewater treatment facilities for both industrial and local municipal customers around the US. EMC's management services extend to steam systems, cold and chilled water systems and wastewater treatment. Customers include small to medium sized municipalities and industrial customers, many of which are in the food sector. EMC forms part of the PGS line of business and BOC's strategy is to expand the range of solutions offered to its industrial customer base.

At the end of January 2003, BOC acquired the partial oxidation syngas plant at Clear Lake, Texas, from Celanese. Under the agreement BOC fulfils a significant proportion of the industrial gas requirements for the Celanese chemical facility at Clear Lake. The Celanese facility is located on the Houston ship canal, and includes a world scale vinyl acetate monomer plant and the world's largest acetic acid plant. These require large quantities of oxygen and nitrogen as well as carbon monoxide.

A new hydrogen and carbon monoxide (HyCO) plant supplying the Thai Polycarbonate Company for the manufacture of plastic resins began production in 2003.

In October 2003, BOC commissioned a new hydrogen plant supplying Citgo's oil refinery at Lemont, Illinois. The hydrogen is used in the removal of sulphur to produce clean fuels.

In the same month BOC, and its joint venture partners, announced plans to invest over US\$100 million in developing three schemes in China, at Taiyuan, Suzhou and in the Pearl River region.

BOC-TISCO, the joint venture between BOC Gases and Taiyuan Iron and Steel Corporation (TISCO), will build two new air separation units (ASUs) with each to supply 1,400 tonnes a day of oxygen to TISCO's plant in Shanxi province in north-central China. The new ASUs represent an investment of US\$82 million and they are scheduled to begin coming on stream after the end of 2005. This investment is in response to strong demand for stainless steel in China and will support TISCO's vigorous expansion plans.

Through Hong Kong Oxygen, its joint venture company in southern China, BOC has reached an agreement with Guangzhou Iron & Steel (GIS) for their joint venture company Pearl River Gases (PRG) to build a further two ASUs, adding around 400 tonnes of production to its current operations. This new investment is scheduled to come on stream early in 2005, supporting the expansion of steel manufacturing in southern China.

BOC's wholly owned subsidiaries in Suzhou have begun construction of new on-site supply scheme pipelines to meet increasing demand for industrial gases from key customers in Suzhou Industrial Park and the Suzhou New District Industrial Park.

A new hydrogen plant to supply both a Sunoco refinery, and a nearby BP refinery is to be built at Toledo, Ohio. The hydrogen will be used by both BP and Sunoco in the production of ultra-low sulphur gasoline and diesel fuels. The complex will be capable of supplying over 120 million standard cubic feet a day of hydrogen. BOC's partner for engineering and construction is Linde BOC Process Plants of Tulsa, Oklahoma. BOC is investing more than US\$100 million in the facility, which is scheduled to be completed in the fourth quarter of 2005.

In May 2004 BOC agreed to buy Duke Energy's 30 per cent ownership interest in the Cantarell joint venture company for US\$59.7 million in cash. This increased BOC's overall stake to 65 per cent on completion in September 2004. This company supplies Pemex with nitrogen for the pressurisation of its oilfields in the Gulf of Mexico.

In China, significant new business was won in the chemical sector with the Sinopec Shanghai Petrochemical Company. BOC will form a joint venture to invest in existing assets and then add further air separation capacity.

BOC's subsidiary in Thailand is to invest in a venture establishing a 1,300 tonnes-a-day plant to supply TOC Glycol Co. Ltd. (TOCGC) in Map Ta Phut and to increase merchant capacity in the area. When completed early in 2006, this will be the largest air separation unit in Thailand. It will be owned and operated by a joint venture between BOC's Thai subsidiary (TIG) and Bangkok Industrial Gas Company.

Group profile

Industrial and Special Products (ISP)

Gases for cutting and welding, hospitality, laboratory applications and a variety of medical purposes are mainly distributed under pressure in cylinders. The ISP line of business covers products and services provided to this section of the market together with sales of packaged chemicals and liquefied petroleum gas (LPG). Customers are typically in the fabrication, engineering, automotive, refrigeration, hospitality or medical sectors. The customer base is therefore broad and varied. The number of separate customers served by ISP is much greater than the other two lines of business and the quality of service is often the key factor in securing existing or obtaining new customers. In order to raise service standards at the same time as reducing costs, national customer service centres have been successfully established in all the major markets.

In addition to supplying gases, BOC also supplies a range of associated equipment in many of its major markets. This includes cutting and welding products and, in some markets, associated safety equipment.

BOC has devoted considerable attention over the last three years to understand the requirements of different types of customer in its major markets and to provide the required service at an appropriate price. Such customer segmentation programmes have been implemented in the UK, South Africa, Australia, Asia, Latin America and are in progress elsewhere.

The cutting and welding applications are a relatively mature part of the industrial gases business and growth opportunities are principally in other segments of the market such as medical applications, packaged chemicals, hospitality and services. BOC is pursuing these opportunities by the development of new products, packages and services as well as by marketing initiatives to take advantage of BOC's global capabilities by introducing existing products to new regions. Electronic commerce has also become an important tool for sustaining and growing sales by making it easier for customers to manage their business with BOC as a supplier.

BOC is a leading supplier of helium and has liquid helium distribution centres, or transfills, in many markets around the world. With 48 helium transfills in its global network, management believes that this is the largest of its kind. Helium has a broad range of applications, including welding and the refrigeration of medical scanner magnets, and is vital to the production of optical fibres, semiconductors and special alloys. It is also used for leak detection, underwater breathing mixtures and lifting.

Business development In April 2002, BOC acquired Matheson Gas Products Canada Inc, one of Canada's leading providers of special gases and equipment. Unique Gas and Petrochemicals Public Company Limited (UGP), a leading distributor of liquefied petroleum gas (LPG) and ammonia in Thailand, was acquired in May 2002. BOC's associated company in Malaysia acquired 35.6 per cent of the gases company Nissan Industrial Oxygen Inc (NIOI) in March 2002 and, following a tender offer, increased its holding to 100 per cent in September 2002. At the end of August 2002, BOC announced an agreement to purchase Praxair's Polish gases business. The transaction was completed in January 2003 following approval by the Polish competition authority. The business acquired includes a high proportion of ISP sales.

Since 2002, BOC has continued its global roll-out of a light-weight medical cylinder with an integrated valve and regulator for homecare patients and emergency services. Heliox, a helium and oxygen mixture formulated to ease the respiratory effort associated with airway obstruction, was launched in the UK.

Capacity at BOC's Otis, Kansas, helium plant was expanded in 2002 to match market demands. In addition, BOC has access to helium produced by other US plants, as well as to product from Poland and Russia. In 2003 BOC and KRIO, a division of the Polish Oil and Gas Company, entered into a new helium supply agreement. BOC will purchase for export all of KRIO's helium that is not sold to its domestic customers in Poland. BOC has been KRIO's sole customer for bulk liquid helium since the original agreement was signed in 1972. In June 2003, BOC announced

an agreement to obtain half the output from a new helium extraction facility to be constructed in Qatar. Deliveries from this new source are expected to begin in July 2005.

Magnetic resonance imaging (MRI) systems use liquid helium to cool superconducting magnets. BOC provides helium as well as a liquid nitrogen filling service to meet MRI operators' total requirements. In 2002, ISP signed a major helium supply scheme with Oxford Magnet Technology in the UK.

BOC continued to invest in refrigerant filling facilities during 2002 and in 2003 new filling facilities were installed in Hong Kong, Malaysia and the Philippines. Each of these was built to a standardised global design. BOC now supplies refrigerants in 19 countries compared with six countries in 1999. In June 2003, BOC announced a global alliance with Hudson Technologies to promote technology for cleaning and recycling used refrigerants.

Significant progress in developing web-based customer portals was made in 2002. Amongst others, ISP launched customer portals in the UK, Australia and New Zealand. Thousands of customers are now able to access detailed material on BOC's product service offers, manage and settle their accounts and place orders on-line.

BOC acquired the Canadian packaged gas and related welding equipment business of Air Products in April 2003.

BOC completed the disposal of the packaged gas part of its US ISP business to Airgas Inc on 30 July 2004. The initial consideration was US\$175 million in cash with up to a further US\$25 million to be paid on or about 15 November 2005 subject to certain conditions. All packaged gases and associated hardgoods were included in the sale. This comprised compressed industrial, speciality (excluding electronic) and medical gases in the US, sold through BOC retail and distributor channels. The sale did not include BOC's bulk liquid helium, bulk medical gases and distributor businesses.

Group profile

BOC Edwards

This line of business specialises in gases, services and equipment for the semiconductor industry as well as vacuum products for a range of other industries. It is organised into four customer-facing divisions for sales and marketing and into four manufacturing divisions. The customer-facing divisions are Asia/Pacific, Japan, the US and Europe and the manufacturing divisions are Vacuum and Exhaust Management, Chemical Management, Bulk Gases and Electronic Materials. Kachina (semiconductor process tool component management service), Coating Technology and Pharmaceutical Systems are managed separately. The major markets for BOC Edwards products are in Asia, north America and Europe.

Management believes that BOC Edwards has a unique position as a fully integrated supplier of gases, vacuum, chemical, slurry and exhaust management products, as well as services to the global semiconductor industry and is a leader in the design and manufacture of vacuum pumps, instrumentation and systems for both general vacuum and semiconductor applications.

The vacuum and exhaust product ranges are manufactured or assembled primarily in the UK, with additional manufacturing and assembly in the US, Japan and Korea. They include vacuum pumps, coating systems, exhaust management systems, temperature control systems and heat exchangers, instrumentation and controls, vacuum accessories and leak-detection equipment. The range also includes specially designed systems for specific applications, depending on customer requirements.

In addition to the semiconductor industry, the leading customers are in the chemicals, scientific instruments and other industries, as well as in educational and research establishments. General vacuum products are sold to such customers by a separate sales force.

Chemical Management Division specialises in the design, manufacture and installation of the systems used to deliver liquid process chemicals, including planarisation slurries to the point of use within semiconductor fabrication facilities. BOC Edwards chemical management products are manufactured mainly in the US.

BOC Edwards service facilities, including plants for cleaning semiconductor process tool parts, are located near concentrations of semiconductor fabrication facilities around the world.

Technology is important to maintain a competitive edge in this business, and considerable resources are committed to enable the business to address new applications and markets. The major research centres are in the UK, north America and Japan.

The Group's vacuum products are sold directly by Group companies to end-users and also through distributors and agents. Management believes that the Group is a leading manufacturer of the types of vacuum products that it makes and provides. The business is highly competitive, with product design and quality, leading to the lowest cost of ownership, being very significant factors.

Sales opportunities for much of BOC Edwards semiconductor equipment business are dependent upon capital investment by the semiconductor industry. Management believes that semiconductor production remains on a long-term growth trend but capital investment by semiconductor manufacturers has been subject to sharp variations for a number of reasons, some of which arise from advances in technology.

The products of BOC Edwards Pharmaceutical Systems are tailored specifically to individual customer requirements in the pharmaceutical industry and are used mainly for injectable products. Freeze-drying systems are made in Tonawanda, New York, US. Filling, sterilising and packaging lines for the pharmaceutical industry are made at Dongen in the Netherlands.

Business development Throughout the period 2002 to 2004, new ranges of dry pumps for the semiconductor industry were introduced as well as a comprehensive new range of exhaust management products. These new products meet the needs of 300mm wafer and flat panel manufacturing facilities.

In 2004 a new range of high-speed iGX pumps were introduced, offering attractive features for semiconductor applications such as small size, reduced power consumption and lower lifetime costs.

The range of exhaust management products was also expanded with new burners, wet scrubbers and an advanced plasma-based system for the destruction of reaction products without the use of methane fuel.

In July 2000, BOC Edwards acquired Kachina Semiconductor Services, a US company specialising in the cleaning of process tool chamber parts. In the same year a new facility and divisional headquarters was established in Phoenix, Arizona, followed by a new facility in Portland, Oregon. Additional facilities were opened in France and China during 2002.

Production of nitrogen trifluoride (NF₃) gas for the semiconductor industry was started at a plant in South Africa during 2000 and production capacity was further increased during 2003. This product is an important etchant that is also used for in-position cleaning of semiconductor process equipment.

In September 2001, BOC acquired Fluorogas Limited, a UK based company with expertise in the development and operation of low pressure on-site fluorine generators. The acquisition was made to assist in BOC Edwards development of alternative cleaning systems for semiconductor process tool chambers. On-site fluorine generators were installed at a number of semiconductor and flat panel display manufacturing facilities during 2004.

During 2001, a decision was taken to concentrate electronic materials production into fewer locations and to close some existing facilities in the UK and the US to increase efficiency and reduce costs. These closures were completed in 2002.

Group profile

BOC Edwards' range of electronic materials in Asia was expanded in 2004 with the addition of ultra-pure wet chemicals through a partnership with Asia Union Electronic Chemical Corporation (AUECC) and through that company with Huayi, a chemical manufacturer in China.

In 2002 BOC Edwards acquired the vacuum and pressure business of the Smiths Group. The operations are located in the UK, north America and continental Europe and typically serve customers in the metallurgy, water treatment, food, power and chemicals industries rather than semiconductor manufacturing.

The acquisition of the turbomolecular pumps business from Seiko Instruments Inc in Japan was completed in March 2002 with the principal objective of enhancing the ability of BOC Edwards to develop vacuum sub-systems to satisfy the growing trend to on-tool pumping in the semiconductor industry.

Hydromatix and Semco were also acquired during 2002 with the intention of positioning BOC Edwards in those market segments expected to deliver the fastest growth. These two companies, based in the US, are involved principally in semiconductor wet processing technology including chemical blending delivery and collection systems as well as liquid waste abatement systems.

BOC Edwards sold its glass coating business, based in the US, in April 2002 but retained its Temescal business that supplies technology for compound semiconductor manufacturing.

Afrox hospitals

Afrox Healthcare Limited owns 60 hospitals and clinics and has a minority interest in a further seven hospitals managed by others. It also manages the Lifecare group of chronic-care hospitals. In addition to hospitals and clinics, which are the core business, Afrox Healthcare Limited also includes Afrox Healthcare Services, which facilitates a direct medicines service for chronic medication, and provides occupational health services, nursing training and laboratory services. Management believes that Afrox Healthcare Limited is the leading provider of private health care in southern Africa.

During 2000, African Oxygen Limited (Afrox) increased its holding of Afrox Healthcare Limited to 82 per cent. During 2001, the 55 per cent interest in Lifecare Special Health previously held by Afrox was bought by Afrox Healthcare Limited.

In January and July 2002, Afrox sold parts of its holding in Afrox Healthcare Limited but retains a 69 per cent interest. This disposal was in accordance with the terms of the transaction between Afrox and PresMed that took place in 1999.

In July 2003 Afrox announced that it was in the process of considering its strategic options with regard to its shareholding in Afrox Healthcare Limited. On 17 November 2003, Afrox announced that it had agreed to sell its entire holding in Afrox Healthcare Limited to a consortium led by two major black economic empowerment investors. In April 2004 the South African Competition Commission advised that the transaction should be approved subject to certain conditions, which were acceptable to both the buyers and the seller. The sale remains subject to approval by the South African Competition Tribunal, at which closing hearings are currently scheduled for March 2005. In addition an application has been brought in the South African High Court by two shareholders in Afrox Healthcare Limited to have the Scheme of Arrangement, by which the disposal would be implemented, declared to have lapsed. This application, which is being opposed, is currently due to be heard in the week commencing 29 November 2004.

Gist

Gist is a provider of specialist supply chain solutions. The name Gist was adopted during 2001 to reflect both the continuing focus on supply chain operations and an increased emphasis on supply chain consulting, end-to-end supply

chain solutions and logistics support to e-fulfilment opportunities. This realignment of the business followed a planned withdrawal from most non-Marks & Spencer primary temperature controlled operations in the period 1999 to 2000.

High quality supply chain operations remain at the core of the business. Gist manages a range of supply chains on behalf of retailers, mainly in the UK, as well as some overseas. For over 30 years Gist has been the largest supply chain provider for Marks & Spencer. Gist currently handles all of its UK food distribution and the consolidation and dispatch of all overseas shipments to subsidiaries and franchised operations.

During 2003, Gist ceased to operate general merchandise logistics and garment stockholding operations on behalf of Marks & Spencer.

Gist has provided supply chain consultancy services to major supermarket and catalogue retailers in the UK and demonstrated its capabilities in managing international supply chains. In addition an on-line wholesaling operation has extended the range of Gist's skills offered externally.

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EMPLOYEES

At 30 September 2004 the Group had 43,383 employees (2003: 44,507 employees, 2002: 46,280 employees). During the year the disposal of the US packaged gas business resulted in the successful transfer of over 1,000 employees to the new owner. Employees of the company and its subsidiaries were located as follows:

Europe	12,712
Americas	6,283
Africa	16,790
Asia/Pacific	7,598

Unplanned employee turnover remains low and as a result the employee base remains stable. BOC invests time and energy in developing the potential of its people. Opportunities are reviewed and discussed with identified individuals to provide cross-line of business experience or to set up a range of functional and geographical assignments. This contributes to BOC's success in retaining and developing the core skills and capabilities it needs to meet its business, customer service and health and safety targets. BOC regularly reviews its succession planning processes and the availability of essential capabilities. Results show it has solid capability in most areas and adequate succession depth to meet both its technical and leadership requirements.

Employee satisfaction and commitment

Employee satisfaction is measured and managed both centrally and in the business units.

Levels of employee satisfaction and commitment are generally high. A culture of accountability, collaboration, transparency and stretch, known as ACTS, has been developed throughout BOC. The ACTS principles provide a framework that employees can use in their dealings with each other and with customers, suppliers and other stakeholders. The GROW programme introduced this year helps employees maximise their performance and unlock their potential. It provides on-line facilities for employees to develop their individual development plans and to have access to all their career development information in one place.

Employment policies and Code of Conduct

The BOC Group takes its responsibilities as a global organisation seriously. It is committed to fostering a workplace that is safe and environmentally sound. It will always act in line with all applicable laws, regulations and industry standards. It expects people to respect confidential information and company time and assets. It believes in open and honest communication, fair treatment and equal opportunities. It opposes public corruption, anti-competitive behaviour and insider trading, and it supports the fundamental principles of good governance and human rights.

BOC is a signatory of the UN Global Compact. It subscribed to its nine original principles and supported the addition of a tenth principle this year on bribery and corruption. These principles represent minimum standards for BOC and in many areas existing standards exceed those set out in the Global Compact.

BOC launched a global Code of Conduct in 2003. An extensive programme of communications has seen over 99 per cent of the target population of BOC trained in the substance of the code, which is a framework of legal and ethical standards for all BOC people to work and live by. The code is supported by a number of processes. BOC has a confidential helpline to deal with questions that is available in every country where it operates. It has translated the standards into key languages.

In addition to the Code of Conduct, BOC provides guidance and human resources policies to support BOC people in their day-to-day activities and long-term career planning. These are aligned to the corporate values and principles. At the heart of this approach is the recognition that the energy and application of individuals and teams throughout the organisation will determine which companies have competitive advantage in today's complex global market.

BOC's employment policies are designed to underpin the Group's operating requirements and growth strategies. The human resources units implementing these policies are aligned to the business units in each geography and, as far as practicable, Group policies are adapted to meet local requirements.

Communication and involvement

BOC places a high priority on two-way communications with its people. The primary communication channels are within the business units, where local managers work with their people and two-way communication is most achievable.

The Group also uses a number of formal and informal communication channels to share information and to shape behaviour. In addition to traditional media such as videos, magazines, newsletters and briefing packs, BOC has continued to invest in e-mail and web-based communications technologies to ensure that consistent and coherent messages are conveyed speedily to its people around the world.

The Group surveyed nearly 4,000 of its employees this year to understand the issues that employees saw as being important and their satisfaction with how these issues were communicated to them. It confirmed that the most important as viewed by employees was safety, followed by the performance and goals of their own business unit and information about customers. This survey will be used to improve communications further over the coming year.

The Group actively searches for ways to involve employees in shaping the future. Teams meet to review or jointly create processes, systems or strategies. A variety of employee structures exist for these purposes, including peer groups, special interest groups, teams of excellence and quality teams. Multi-disciplinary and cross-geographic groups of employees regularly meet, either face-to-face, or by using tele-, video- and web-based meeting technologies which have been installed for these purposes.

Resourcing, training and development

Resourcing, training and development programmes are designed to ensure that the Group has a pool of well-qualified, gifted individuals able to meet day-to-day operational needs and plans for the future. BOC conducts a robust annual process to assess the strengths and weaknesses of its units.

It is committed to providing its people with opportunities to develop and grow, but also to bring new blood into the organisation through targeted external recruitment. A global, web-based recruiting platform is in place to supplement other recruitment channels.

Employees

BOC continued to place great emphasis on personal and career development over the past year. Employees are encouraged to be proactive about their future careers and development opportunities. The aim is for all employees to have regular discussions with their managers regarding their aspirations, prospects and development needs. These result in the formulation of an individual development plan, which is an agreed course of action to meet employees needs as well as the needs of the organisation. The GROW process not only aids the development of individual development plans but also performance management. Action plans can be developed and monitored incorporating input from 360 degree appraisals. BOC offers many opportunities for career and personal development. Employee development takes the form of on-the-job coaching and training, development projects, secondments, e-learning, as well as more traditional classroom-based training.

In addition to the development that takes place to achieve current job effectiveness of all employees, high potential employees are identified and developed with future roles in mind. Lead is an ambitious executive development programme for high potential senior managers, facilitated by world class external providers as well as senior BOC executives. It is customised for BOC and is comprehensive in its scope. The programme offers a tailored curriculum and is designed to equip the participants with the broad range of skills and experiences they will need to be successful leaders within the Group. To date, over 130 senior managers have had the opportunity to participate in Lead programmes.

A parallel leadership development programme, iLead, has been developed for high potential middle managers and is run regionally around the world. Lead and iLead augment many other management development initiatives, which are provided to all BOC's supervisors and managers.

International assignments are used to develop high potential executives and to create opportunities within local management teams. The success of such programmes are reviewed regularly with business unit heads as part of their performance contracts.

BOC believes that how its employees work is as important as what they produce, which is why it has concentrated on the behaviours associated with accountability, collaboration, transparency and stretch – the ACTS cultural principles. Accountability comes through people knowing what they are accountable for and being empowered to deliver. Collaboration is about drawing on the rich diversity of styles, talents and skills across the Group to maximise achievements. BOC values transparency because of the belief that visible problems can be solved and that informed people make better decisions. Finally, stretch advocates continually pushing the boundaries of performance. BOC has created a set of leadership competency models, which are aligned to ACTS. All recruitment, development, recognition and enhancement processes are being aligned to this comprehensive and unified BOC view of leadership and management.

Reward and recognition

An organisation that aspires to excellence must recognise and reward the achievement of excellence. The Group continues to refine the key value drivers of its business units and to ensure it can reward and recognise outstanding individual and team performance in the fulfilment of business goals. Programmes to achieve this are cascaded throughout the organisation to heighten focus on effective performance at all levels.

The Group continues to move towards a total reward system that allows people to structure their remuneration and benefits to suit their individual needs. Senior executives' remuneration is linked to a Group-wide variable compensation plan, which is described in the report on remuneration on page 64.

Retirement benefit plans

BOC considers it important that its people provide for their retirement and fully supports their efforts in this regard. Around the world, the Group provides opportunities for people to participate in retirement programmes tailored to suit local conditions. Just as importantly, the board's pensions committee takes prudent steps to monitor and control Group-wide retirement benefit plans with local managers being responsible for safeguarding the security of each retirement plan that they sponsor.

BOC closed its UK defined benefit pension schemes to new members in 2003 and replaced them with a defined contribution plan.

The financial position of the Group's main pension funds is detailed in note 8 to the financial statements.

Diversity

BOC believes that diversity is a key driver of future organisational and operating effectiveness. As one of the UK's few truly global companies, BOC highly values the rich diversity of its people. While the Group consistently champions a set of unifying values and principles, they are not imposed regardless of local sensibilities. Rather, the Group strives to build on the qualities inherent in its global environment by encouraging people with different views, styles and approaches. Wherever in the world it operates, BOC is committed to maintaining a workplace free from discrimination for reasons of race, creed, culture, nationality, religion, gender, sexual orientation, age or marital status. The success of its diversity programme is monitored and reported regularly.

Disability is not considered a barrier to employment and, as far as local conditions allow, employees are selected on the basis of their ability to perform the job. Further necessary training is arranged, taking account of their particular needs and the resources required to meet them.

Employee share schemes

Many BOC employees in the UK and some other countries have built up an equity interest in the Group's business through employee share schemes. Options may be granted at a discount to the market price at the date of grant. The term of options granted could be from three to seven years and any option is conditional on a commitment by the individual to make regular savings from pay that are then held by an independent organisation to purchase shares at the end of the option period. The exercise of options under these schemes can be satisfied by the issue of new shares or the transfer of existing shares.

SOCIAL, ENVIRONMENTAL AND ETHICAL PERFORMANCE

Exercising sound corporate responsibility is fundamental to the way BOC operates. The Group aims always to behave ethically and to manage risk strategically. It has a process for identifying, evaluating and managing all risks in accordance with best practice.

This section outlines the Group's systems for managing its social, environmental and ethical (SEE) risks and opportunities in line with guidelines set out by the Global Reporting Initiative, the Association of British Insurers, the UK's Combined Code on Corporate Governance and the provisions of the US Sarbanes-Oxley Act 2002 as it applies to foreign private issuers. More details about BOC's risks and corporate responsibility performance can be found in the sections on risk factors on pages 32 and 33 and corporate governance on pages 56 to 63 and on the company's website, boc.com.

The Group works actively with its stakeholders – shareholders, customers, suppliers, employees, local communities and governments. Underlining the Group's adherence to best practice, BOC engages with a wide variety of employee, safety, environmental and community bodies.

BOC is a signatory to the UN Global Compact. This year BOC participated in the Global Compact's review and implementation of a tenth principle against corruption. All Global Compact principles are integrated into BOC's Code of Conduct. BOC continues to review and adapt its business practices to achieve the Group's SEE objectives and activities.

Executive responsibility

BOC has an integrated approach to SEE risks, managing them in the same way as all other business considerations through business unit and Group risk management programmes. These processes are applied to major business decisions such as acquisitions, disposals, new ventures and major supplier contracts. BOC business dealings are guided by a global Code of Conduct. The code sets out the safety, environmental, social, legal and ethical parameters that Group businesses and employees are expected to follow. The code is the responsibility of the executive management board (EMB), whilst BOC's businesses are responsible for day-to-day implementation.

EMB members are responsible for each of the code's standards, supported by the appropriate business and functional structures. The Group chief executive has ultimate responsibility for the code programme. He delegates oversight to an EMB sponsor board and day-to-day management to a code advisory group. The code advisory group is chaired by the general counsel, global compliance.

Safety, health and environmental management systems are the responsibility of the Group chief executive and implemented by the Group director for safety, health, environment and quality (SHEQ). Workplace issues, including labour relations, diversity, equal opportunities and human rights, are managed by the Group director, human resources (HR). Marketplace issues, including customer relations and ethical trading practices, are managed by the line of business chief executives. The director of supply management oversees BOC's supply chain and ethical purchasing policy and reports to the Group chief executive. The Group director, corporate relations, manages community relations, including sponsorships and charitable support.

The EMB regularly reviews Group systems for managing risks and opportunities, including business assurance audits, legal, SHEQ and HR reviews, appropriate training and communications, and performance management and remuneration incentives through the Group's performance contract process. Directors are provided with appropriate SEE training and communications. For example, they are given regular safety briefings and Code of Conduct progress reviews. Training on defensive driving and other SHEQ priorities is provided. The EMB sets a strategic direction with regards to all business issues including SEE matters. Business units implement and develop the EMB's strategy through their own management teams.

The Code of Conduct

BOC has spent two years developing and rolling out a global Code of Conduct. It covers SEE risks and expectations. This year the code programme consisted of:

- setting minimum and consistent standards around the world;
- communicating Group priorities, principles and standards to all employees;
- stakeholder engagement to identify, prioritise and respond to key issues;
- training for employees;
- setting standards for agents, consultants, distributors and suppliers through the Group's ethical purchasing policy;
- managing Group performance in line with the code;
- assurance, using the Group's business assurance audit/risk management, SHEQ and HR functions as well as external auditors where appropriate.

This year the Group moved from the code's implementation phase into its sustainability phase. This is aimed at further embedding the code and so far as possible measuring the Group's performance against standards laid down by the code.

A global network of implementation managers drove the code's roll out in workshops across more than one thousand locations worldwide and has been superseded by a network of implementation managers. A code sustainability strategy ensures the programme remains visible, accessible and relevant to all BOC employees.

The code is available on boc.com and available to employees via intranet, CD or paper copy. The code is linked to a number of other BOC systems, notably the Group's integrated management systems and standards (IMSS).

BOC operates a confidential 24 hours a day/seven days a week helpline to receive and answer questions and concerns about legal compliance, ethical conduct and adherence to the Code of Conduct. It is managed by the global compliance department. Investigations are overseen by global compliance and managed by appropriate functions, notably HR, SHEQ and business assurance audit/risk management. Code sustainability issues are reported to the EMB and appropriate managers on a monthly basis. In its inaugural year, the helpline received 103 allegation cases from around the world. Of these 21 per cent resulted in disciplinary action, and 50 per cent were found to be unsubstantiated or non-violations. The remaining cases are still being investigated.

Social, environmental and ethical performance

BOC's global management system (IMSS)

IMSS (integrated management systems and standards) is a system developed by BOC. It has three distinct parts: the IMSS Library, Traccess and Audit Manager. The IMSS Library houses electronic copies of BOC's reference material, instructions, procedures and standards. Traccess is BOC's online training and testing system storing individual learning profiles and employee training histories. Audit Manager reviews all stages of the audit cycle and tests site performance and compliance against best practice and minimum standards defined in the IMSS Library. IMSS documents Group knowledge from high level policies to detailed work instructions, enabling employees to be trained and assessed in the skills required by their roles. IMSS outlines the correct protocols and minimum standards and tracks the performance of actions needed to ensure the safe, environmentally sound and efficient management of BOC businesses worldwide. IMSS and the Code of Conduct are mutually supportive.

Stakeholders

BOC's code is segmented into key stakeholder groups, each of which is addressed by specific code standards and management structures and procedures. Details are posted under the corporate responsibility section of boc.com. For example, BOC works with its suppliers through its ethical purchasing policy, which is managed by the Group supply management function, underpinned by the Code of Conduct and supported by IMSS and a number of other web-based platforms. A supplier evaluation, selection and performance appraisal (SESPA) system assures minimum standards of supplier performance, quality assurance and legal, ethical, social and environmental compliance.

Identifying and prioritising SEE risks

BOC introduced a formal process to identify and manage its SEE risks and to identify potential opportunities. EMB directors, business unit heads and other key managers around the world submitted potential SEE risks which were consolidated by the Group risk management function and rated using predetermined scoring criteria. Each risk was rated according to its potential impact, the adequacy of plans to mitigate the risk, and its urgency.

The broad areas identified by the SEE risk and mitigation process are: managing the safety of people associated with BOC; managing major operational hazards; minimisation of greenhouse gases emissions; energy efficiency; water conservation; global adherence to and the effective working of the Code of Conduct; managing an ethical supply chain; and continuing enhancement of product stewardship procedures.

The Group's SEE review found that management systems and mitigations already exist for identified risks, but in some minor instances enhanced measures may be required.

Managing corporate responsibility performance

This year the Group participated in the UK's Business in the Community (BiTC) corporate responsibility index for the first time. The index assesses companies' performance against a wide range of environmental, social and ethical measures. BOC has participated in the index's sister survey, the Business in the Environment (BiE) index since 1995. BOC scored 91.69 per cent in BiTC's index, ranking it 25th out of 139 participating companies, including 56 from the FTSE100. Completing the index demonstrates the Group's commitment to managing, measuring and reporting its corporate responsibility performance in an open and transparent way. BOC's completed survey and BiTC's independent assessment of the Group's performance is published on boc.com. The BiTC index is the Group's common measure and standard response to corporate responsibility and SEE enquiries.

Safety, health and the environment

There are no greater priorities for BOC than the health and safety of colleagues, contractors, suppliers, customers and local communities, and the protection of the environment. BOC is committed to excellence in managing these areas through normal business practice assisted by its safety, health, environment and quality (SHEQ) function.

SHEQ policies and procedures are the responsibility of the Group chief executive and implemented by BOC's businesses with the support of the SHEQ function. The SHEQ department works within the businesses to ensure that the Group has a deliverable policy, is active in its risk assessment and professional in its mitigation.

BOC has well-established programmes to drive improvement in SHEQ performance. Employees are required to comply with all external regulations and the Group's policy and Code of Conduct. Suppliers are expected to meet minimum standards set by BOC's ethical purchasing policy.

Standards, procedures and tools are embedded in Group practice by the organisation's integrated management systems and standards (see IMSS section above). IMSS outlines the minimum standards and actions needed to align with or conform to management systems such as ISO 9000 (quality assurance), ISO 14001 (environment) and ISO 18001 (health and safety).

BOC met its objectives in 2004 when the Group:

- updated its safety, health and environment policy;

- launched Safety in BOC focusing on key safety behaviours across the organisation;

- continued to conduct its audit programme of safety standards and assessment of the organisation's safety culture.

- Annual safety action plans are derived from these processes, and integrated into individual and business performance contracts;

- continued to conduct its annual environment survey. Annual environmental action plans are derived from the survey's results, which are integrated into individual and business performance contracts;

- commenced the sustainability phase of its Code of Conduct programme, ensuring that SHEQ considerations continue to be reinforced and integrated into the organisation's legal and ethical framework.

Along with the Code of Conduct and the Group's ACTS operating principles, Safety in BOC ensures that SHEQ issues are managed consistently across all countries and businesses.

Social, environmental and ethical performance**Overall safety performance**

	2003 ¹	2004 ¹
Lost workday case rate	0.45	0.41
Total recordable case rate	1.18	1.18
Passenger car avoidable accident rate	1.99	2.12
Truck avoidable accident rate	2.75	2.38

Lost workday case rate**Total recordable case rate****Passenger car avoidable accidents per million miles****Truck avoidable accidents per million miles**

1. 2003 and 2004 safety statistics include mergers, acquisitions and all joint ventures. Previous years have not been restated.

Safety

Safety is BOC's highest priority. Safety is the first agenda item at every EMB and business executive meeting. Great emphasis is put on providing employees with all the necessary training, equipment and safeguards. Business managers around the world, with SHEQ support, continually strive to improve safety performance concentrating on individuals behaviour and the effect safe behaviour has on the organisation.

Each business unit has a safety function, reporting to the business unit's executive and the Group SHEQ function through a global peer group. This ensures that global best practice and the functional requirements of the business and Group are always at the forefront of management thinking.

BOC manufactures and distributes products that are potentially hazardous, some being stored at very low temperature or under pressure, and some having toxic or flammable properties. BOC is committed to operating safely and communicating safe working practices as an integral part of its safety and product stewardship processes. It is important for the Group to disseminate these safe working practices to customers and suppliers and to have clear and measurable performance standards practised by all BOC plants, depots and distributors.

Controlling process-related risks is of the utmost importance. Any incidents that do occur are thoroughly investigated and the lessons learned are applied throughout the organisation to minimise the likelihood of recurrence. Safety lessons are shared throughout the gases industry and BOC continues to participate fully in the development and application of industry-wide codes.

This year the Group implemented Safety in BOC. It complements and strengthens the organisation's existing safety systems and standards. An independent safety audit in 2002 showed that safety performance could be improved by

emphasising the behaviour of all employees. Business unit leadership teams have conducted education, leadership and planning workshops around Safety in BOC. These are being followed up with a focus on leadership skills to influence people's behaviours. A new technique, LeadSafe, is being introduced to help drive change. These elements will continue to be important features of BOC's overall safety strategy.

Safety in BOC aims to prevent people getting hurt by guiding managers to effect lasting behavioural change. Independent studies suggest that more than 90 per cent of all incidents in the workplace are the result of unsafe acts, so changing behaviour has a significant impact.

Safety in BOC draws together and strengthens the Group's safety policies, principles, standards, procedures and tools. It underpins the principle that safety is 100 per cent of our behaviour, 100 per cent of the time. A safety roadmap charts how the businesses and sites will continue to develop globally consistent strategies to move the Group towards world class safety performance.

This year BOC further developed its approach to tracking key performance indicators for safety. The Group traditionally tracks reactive or lagging indicators, for example: lost workday cases, medical treatment cases, passenger car and truck incidents. Lagging indicators measure past events and measure business unit safety performance. The organisation has also introduced a set of proactive or leading indicators, for example: safety meetings held, the close out of corrective actions from audits, investigation reports completed on time, and training. Leading indicators have been integrated into individual and business performance contracts and business unit reviews. Site managers compile leading indicator statistics and report these to their business unit heads.

Over half of BOC's major incidents involved vehicles and the Group is focusing attention here. Safety-related driving initiatives and programmes are in place around the world for both commercial and passenger car drivers. These include defensive driving training, observation and feedback, vehicle design, use of on-board monitoring technology, and anti-rollover and jack-knife training. Other areas being addressed include the embedding of safety criteria as part of employee recruitment, induction and ongoing training.

Developing and sharing best practice across the world helps reduce risk and the number of driving-related incidents. The Group strengthened its major vehicle incident investigation procedures to improve consistency of approach, understanding and analysis of contributing causes, assessing the trends and implementing remedial strategies to prevent recurrence. This process has been successfully piloted and is being further integrated into Group reporting systems and standards.

Every year, BOC takes steps to prevent and address the underlying causes of incidents as well as to ensure employee security in the workplace. It is a matter of great regret that four Group employees died in work-related activities in 2004. Two employees died in road incidents, one in the Czech Republic and one in South Africa. One employee in South Africa was electrocuted at a BOC site and a driver in the US died whilst delivering product to a customer. The Group chief executive, SHEQ director and business unit managers review every fatality and major incident personally. Investigations are only closed when the chief executive is fully satisfied that the root causes of the incident are understood and action has been taken to prevent future occurrences.

The Group has four principal reactive indicators to provide a consistent measure of its workplace and vehicle safety performance. These are:

- lost workday case rate (LWCR) per 200,000 hours. This includes all accidents resulting in the loss of one complete day of work, according to best international practice. Many companies only report cases resulting in three or more lost workdays as deemed reportable under RIDDOR regulations;
- total recordable case rate (TRCR) per 200,000 hours. This includes all LWCRs and medical treatment cases;
- passenger car avoidable accident rate (PCAAR) per million miles;
- truck avoidable accident rate (TAAR) per million miles.

Occupational health and hygiene

BOC requires its businesses to manage employee health activities in accordance with local laws and regulations and according to BOC's codes of practice, standards and procedures. The Group's occupational health and hygiene (OH) function provides a global service, striving to eradicate work-related health hazards.

Social, environmental and ethical performance

Non-compliances

(violation of laws, complaints and spillages)

No. sites reporting incidents

Hazardous waste

(variability in national legal classification)

Tonnes x 1,000

Ozone depleting potential substance release (solvents and refrigerants)

Tonnes (ODP) released

General waste disposal 2004

Total 26,675 tonnes

Types of general waste

Total 26,675 tonnes

Employees have access to guidance on OH from qualified SHEQ managers. This is supported by a range of training programmes, manuals, videos and safety data sheets, which are available through local and global SHEQ functions and on dedicated SHEQ intranet sites.

The OH function carries out reviews in all business units to provide information and guidance on the main health issues that exist in BOC operations globally and how best these potential hazards may be minimised or eliminated. This is achieved by providing best practice standards and guidance to local SHEQ personnel who then implement these standards and policies as necessary. Adverse employee health effects are monitored through local occupational health checks around the world. These vary according to risk and requirement. Some are internal and others are out-sourced to professional OH providers. Voluntary and routine Well-person medical checks for employees engaged in hazardous activities or facing other risk factors are conducted throughout the year.

The main potential health issues that exist in BOC operations differ across business units. When dealing with gases, the main potential health issues are:

- exposure to noise from gas compression activities and from cylinder handling;
- potential exposure to some gases filled into cylinders;
- potential exposure to chemicals used in metal cleaning;
- painting operations;
- ergonomic and manual handling risks.

OH programmes have been developed to deal with these issues and are applied across the Group. BOC programmes include: a new OH service with a global provider to enhance the emergency care given to BOC business travellers taken ill away from home; an AIDS/HIV prevention, treatment and care programme for employees in southern Africa; an education programme to raise awareness of the effects of noise; a manual handling training video; a legionella

control programme for water systems such as cooling towers present on sites; a programme for the assessment of manual handling and display screen equipment to minimise ergonomic health risks; a chemical assessment and management programme; and specific work to reduce the use of solvents. The last includes a new training video addressing the specific hazards of using chemicals to clean plant and equipment for use with oxygen.

OH programmes strive to reduce employee exposure to present and potential hazards, drive best practice across the businesses and are part of the Group's commitment to continuous improvement. OH programmes are being piloted in response to occupational stress, drugs testing, and to provide fast-track physiotherapy to aid employees' recovery from injury.

One of the most visible OH programmes is the Afrox AIDS/HIV programme in southern Africa. The objectives of the programme are: to encourage prevention of HIV and AIDS infection through education and awareness training; to provide treatment to prolong life expectancy to employees living with HIV through the provision of anti-retroviral therapy and a disease management programme; and to provide pastoral care, which includes counselling and other types of support for HIV-positive employees.

The environment

BOC is committed to sound environmental practices, implemented through a worldwide environmental management system which includes operating instructions, training, performance tracking and auditing, and the sharing of best practice through the Group's integrated management systems and standards (IMSS) together with an annual global environment survey managed by the SHEQ department. The results of the environment survey are reviewed by the EMB, business unit management teams and the Group SHEQ director. Annual environment action plans are integrated into business unit management processes together with business and individual performance contracts.

BOC is classified as part of the chemicals sector, but does not have the same direct or significant environmental issues to deal with as traditional chemicals manufacturers. The nature of BOC's activities and the type of chemicals handled are quite different. However, in line with other industries, BOC is committed to the conscientious stewardship of its products and services.

Management of environmental issues that are relevant to the Group's businesses is overseen by the SHEQ department. Many BOC business units have programmes to achieve ISO 14001 environmental certification. The Indura business in Chile obtained ISO 14001 in August 2004 at its Solcon plant that manufactures MIG wire. The St Helen's site in the UK renewed its ISO 14001 certificate this year. In 1995 St Helen's was one of the first sites in the UK to receive ISO 14001. In addition, BOC's hydrogen plant on Teesside in the UK obtained its certificate this year. All BOC sites operate in accordance with ISO standards even if not specifically accredited, because IMSS, containing the Group's global operating systems and standards, is aligned to ISO 14001.

This year BOC's global environment working group teamed up with occupational hygiene professionals to develop best practice strategies. The Group's web-based environmental survey, which covers approximately 550 industrial sites around the world continues to be used to develop action plans and report performance on-line. This system reveals opportunities for the development and sharing of best environmental practice across sites and businesses. For example, Afrox hospitals at Kingsbury and Claremont installed a water recycling system for their autoclave sterilisers in response to survey findings. The water saving at one hospital on average equates to 3.5 million litres a year.

BOC has operated a comprehensive environmental survey programme of its sites for more than ten years. The annual survey highlights issues relevant to the businesses and assesses how well they are being managed. Objectives for improved performance remain an integral part of business performance contracts.

Disappointingly ozone depleting potential (ODP) substance releases have increased this year. 60 per cent of the total released was from two plants. Plans are in place to improve performance by modifying both plants and developing action plans to improve other plants.

Social, environmental and ethical performance

Climate change is now recognised as a significant environmental issue. This presents BOC with challenges and opportunities. The most significant challenge is the fact that BOC is a major energy user and a partner and supplier of products to energy intensive industries such as iron and steel. Opportunities lie in the development of products and services that help customers manage their own climate change issues, for example, energy efficiency improvements or cleaner production that reduces greenhouse gas emissions.

BOC's electricity consumption was approximately 11.8 Terawatts and emissions for this financial year are estimated to be 7.5 million tonnes carbon dioxide equivalents of which the two gases businesses, Process Gas Solutions and Industrial and Special Products, account for 98 per cent. They produce approximately 2,420 tonnes of carbon dioxide equivalents for each £1 million of turnover. These emissions are from major combustion sources and emissions associated with electricity used by all BOC's major facilities. Whilst emissions associated with Group processes are significant they should be viewed in the context of the nature and scope of BOC's businesses. As a matter of business and environmental necessity, the Group will continue to manage climate change issues effectively and responsibly.

BOC's methodology for emission estimation and addressing emission factors has been independently assessed and confirmed to be appropriate. The Group uses energy data to help improve its energy efficiency with resultant improvements in carbon dioxide emissions. Over the last four years, for example, Process Gas Solutions operations have continued to focus on plant and distribution efficiency improvements, resulting in more than one thousand projects that will deliver significant annual savings. One project was successful in winning an application for New South Wales Greenhouse Gas Abatement Certificates as a result of the installation of a Linear Model Predictive Control (LMPC) system at the Port Kembla site in Australia. This project is one of the largest to qualify under the scheme rules and demonstrates BOC's commitment to improving the energy efficiency of its production processes. LMPC has helped the business to reduce gaseous oxygen losses at the site, which in turn means that the business consumes less electricity.

BOC's commitment to environmental stewardship and partnership is shown in its approach to new plants, facilities and services. BOC and the Australian CSIRO entered into an agreement to commercialise fumigation technology to replace methyl bromide, a widely used fumigant that is being phased out under the International Montreal Protocol. The fumigant ethanedinitrile (EDN) is considered better environmentally and more effective than methyl bromide to sterilise soils from insect pests, weeds and diseases before planting high value crops such as strawberries and carrots. Also in 2004, BOC formed a major alliance with leading refrigerants reclaim firm Hudson Technologies. A seven-year agreement covering 20 countries provides BOC with exclusive access to Hudson's recovery, reclaim, diagnostic, analytical and gas cleaning equipment and software technology. The technology will improve plant efficiency, leading to energy savings and environmental benefits from reduced carbon dioxide emissions.

Selecting the right supplier for BOC is fundamental to conducting business effectively and ethically. Throughout its businesses, BOC has adopted the SESPA process for supplier evaluation, selection and performance appraisal, together with an ethical purchasing policy implemented by the supply management function.

BOC aims to comply fully with all material environmental laws and regulations. Four prosecutions for breaches of environmental regulations were incurred in 2004 resulting in fines totalling £3,670. BOC has responded with measures to abate and prevent future occurrences as part of the Group's programme of continuous improvement.

The US Environmental Protection Agency has named The BOC Group Inc as a potentially responsible party for clean-up costs at a number of hazardous waste sites. Although liability for the remediation of such sites may be legally imposed without regard to the quantity of waste contributed, based on the information available management believes that it is unlikely that any costs incurred will have a material impact on the financial position of the Group.

BOC continues to assist customers to improve their own environmental performance. Environmental legislation also presents BOC with a number of potential business opportunities. BOC and the Cardiff Harbour Authority in the UK won the ABB-sponsored IChemE Environment Award 2004 for the Harbour Four oxygenation vessel that replenishes oxygen into Cardiff Bay. This is a good example of BOC technology benefiting the general public as well as industry. BOC has also patented systems to recover carbon dioxide from other companies' productive processes and

put it to constructive use. For example, reclaimed carbon dioxide is infused in drip-irrigation water or used to enrich atmospheres to enhance crop growth. The glass and metals industries use BOC's oxy-fuel burners to increase the efficiency of combustion, using less fuel and reducing polluting emissions.

The Group continues to develop technology that is more energy efficient, which helps customers and partners meet their carbon dioxide reduction commitments under the Kyoto protocol on climate change. As part of this commitment, BOC's Torrance and City of Industry air separation plants in the US received substantial funding from the energy efficiency programmes run by Southern California Edison.

The Group continues to work actively with its stakeholders to ensure environmental issues are approached responsibly and supported actively. BOC is a signatory to the UN's Global Compact and in the US and Australia supports the chemical industry's Responsible Care programme. BOC continues to participate in the UK's Business in the Environment (BiE) survey. This year the Group improved its overall survey score achieving 88.59 per cent, placing BOC in the top 25 per cent of FTSE and other companies participating in the survey.

Details about the BOC Foundation for the Environment can be found on page 62.

1. BOC's methodology is consistent with all major point sources of carbon dioxide emissions within Scope 1 of the World Business Council for Sustainable Development and the World Resources Institute (March 2004) and all major sources of carbon dioxide emissions under Scope 2 of the protocol. The figure does not include non-carbon dioxide global warming gases (N₂O, SF₆, CH₄, PFCs and HFCs), freight and logistics and minor sources such as business travel, office electricity at small sites and decomposition of wastes and carbon dioxide emissions associated with heat and steam imported to BOC plants.

RESEARCH, DEVELOPMENT AND INFORMATION TECHNOLOGY

Research and development (R&D)

Process Gas Solutions undertakes internal development at sites around the world with the primary location being the Group Technical Center in New Jersey. It enters alliances and partnerships with universities and customers, licenses or acquires technologies from third parties, and participates in technology-based ventures. Funding from governments has also been used to progress key developments.

Working with its partners Sumitomo Electric Corporation and IGC Superpower, BOC is installing high temperature superconducting (HTS) cables to provide electricity in Albany, New York. These transmit electricity with significantly lower losses than conventional cables and provide five-times the current carrying capacity when cooled to -196°C .

Work continues with European Union funding on novel ceramic materials that have the potential substantially to improve oxygen generation and the sequestration of carbon dioxide (CO_2). Funding from the US Department of Energy to generate hydrogen at high pressure through a combination of membrane reactor and a hydride compression system is aimed at the future needs of the hydrogen economy. Novel LPG-based fuel cell technology research is also being undertaken with St Andrews University in the UK.

While world-class hydrogen/synthesis gas technology is available through Linde BOC Process Plants, the development and commercialisation of ceramic-based technologies for the production of H_2 and syngas continues.

Technology developments for the pulp and paper and food industries using BOC expertise in heat and mass transfer are focused on reducing operational costs while improving environmental performance. BOC's impingement freezer, for example, uses highly directed jets to provide rapid heat transfer. BOC has also successfully developed a crusting tunnel that can achieve a uniform crust freeze on meat logs for slicing in high speed slicing machines.

Industrial and Special Products has introduced several new manufacturing techniques, three of which are specific to filling hydrocarbon mixtures: the continuous sequential filling of components that increases plant throughput; the costing and accurate filling of components at low concentrations; and improved data acquisition techniques to meet the requirements of ISO 6142. An automated system has also been introduced for manufacturing scientific gas mixtures using a thermodynamics data package to determine precise target pressures during filling.

In the medical field new clinical applications are being explored for oxygen and helium mixtures and the use of gases to deliver drugs effectively.

Industrial developments include the use of cryogenic coolants to minimise distortion during welding and the use of cold gas dynamic spraying in a number of industrial processes.

Research and development for BOC Edwards is conducted around the world, with key sites located in the UK, north America and Japan.

BOC Edwards introduced the new iGX range of compact, high-speed pumps with reduced power consumption and lower cost of ownership. These new pumps have remote monitoring and diagnostics. Developments in split-flow turbomolecular pumps combined with dry backing pumps have opened new opportunities in the scientific instruments sector. The combination of high-speed turbomolecular pumps and control technology to provide chamber pressure control enhances the performance of critical etch process tools for semiconductor manufacturing.

Wet scrubbers, burners and other exhaust management units have been developed to help manufacturers in key market sectors abate liquid and gaseous by-products and thus meet strict environmental regulations. An advanced plasma-based system destroys reaction by-products for customers unable to use methane fuel.

A new range of fluorine generators was introduced that reduces the cost of cleaning process tools, without using high global-warming impact gases. On-site fluorine generators have been installed with a number of LCD and semiconductor manufacturers. R&D in low **K** materials has resulted in an investment in trimethyl silane production, an important chemical precursor for microprocessor production. The newly introduced liquid flow control product LiquiSys provides more precise delivery of chemicals for semiconductor fabs. A non-contact weighing system using technology derived from magnetic resonance imaging speeds up vial filling and has been supplied to pharmaceutical customers.

Nitrogen trifluoride production increased in South Africa and ultra-pure chemicals were added to the electronic materials range in Asia through a partnership with AUECC, and through AUECC with Huayi in China. The Spectra range of gas generators is being enhanced to deliver larger gas flows, meeting all demands up to the requirements of the largest flat panel factories.

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Research, development and information technology

BOC Edwards, assisted by Gist technology, has developed supply chain management for gases and chemicals and won a major contract from a leading microprocessor manufacturer. Total materials management and total gas and chemical management capability are part of an innovative and broad service offering. The use of enhanced metal and dielectric coatings on process tool parts has helped reduce customer cost of ownership.

Subsystem developments continue, combining many of our technologies for advanced customer processes. In collaboration with a lithography customer, BOC Edwards has created a subsystem which conditions the ultra-pure water used in immersion lithography tools. Development is already underway on systems for the next generation extreme ultraviolet vacuum-based lithography tools. A supercritical CO₂ tool has been released, and is being used to develop critical cleaning processes for future generations of chip making at a key industry development facility.

Total R&D expenditure in 2004 was £41.6 million compared to £39.9 million in 2003 and £47.0 million in 2002.

Information technology

Standardisation on a common SAP computing system continued with successful deployments in Korea, Malaysia, Colombia and Venezuela. Our newly acquired businesses in Canada and Poland were fully integrated and, following a successful initial implementation in Europe, SAP was subsequently extended to BOC Edwards' operations in the US. Improved devices for electronically capturing data at the point of delivery have been deployed in the Australian and UK Industrial and Special Products businesses. Partnet, an e-commerce system for BOC agents, was implemented in a number of countries.

The south Pacific data centre was closed and data processing from Australia is now done in the global data centre in the UK. In South Africa a new centre has been set up to develop applications and provide support for systems that are specific to BOC. For other systems, development and support capabilities have been established with third party suppliers in India.

RISK FACTORS

This document contains certain forward-looking statements which involve risk and uncertainty as they relate to future events and circumstances. The following risk factors, as well as those discussed on page 50 of the financial review could cause actual results to differ materially from those expressed or implied by these forward-looking statements:

BOC is affected by the semiconductor business cycle

Manufacturers of semiconductors represent BOC Edwards' major customer base, and BOC Edwards' profitability is directly linked to the demand of these manufacturers for vacuum equipment, services and industrial gases. The semiconductor industry has experienced significant growth over the long term, but is cyclical in nature. Recent improvements in the level of demand for BOC Edwards' services may not be sustained due to reduced demand from end users of technology products and/or excess supply of semiconductors. The competitive nature of the semiconductor industry can reduce profit margins for suppliers of products and services to semiconductor manufacturers. Either of these factors or a combination could adversely impact BOC's financial results.

Acquisitions may not be successful in achieving intended benefits and synergies

BOC has completed a number of acquisitions in recent years as part of its growth strategy and may make acquisitions in the future. While BOC identifies expected synergies, cost savings and growth opportunities prior to completing any acquisition, these benefits may not be achieved owing to, among other things:

- delays or difficulties in completing the integration of acquired companies or assets;
- higher than expected costs or a need to allocate resources to manage unexpected operating difficulties;
- diversion of the attention and resources of BOC's management;
- inability to retain key employees in acquired companies;
- inability to retain key customers;
- assumption of liabilities unrecognised in due diligence.

The growth of BOC's gases business will depend on the ability to win and execute large projects profitably

BOC, through its Process Gas Solutions (PGS) line of business, has a strategy for growth that requires significant investment each year to serve key customers in different geographies. Failure to execute projects successfully for these customers will impact PGS's ability to win new projects from these customers, and therefore may impact BOC's future financial results. The specific risks associated with major projects include:

- failure to complete the project on time owing to unforeseen construction problems (which may require BOC to pay penalties under the terms of the customer contract);
- failure of the plant to deliver the contracted volumes and quantities of product required by the customer because of design errors or errors in manufacturing or construction (which may require BOC to pay penalties under the terms of the customer contract);
- inability to operate the plant at costs assumed in BOC's financial evaluation of the project.

The safety of BOC's operations is critical to success

Industrial gases are hazardous substances and BOC recognises that managing safety in operations, transportation and products is critical to achieve growth and financial results. Failure to maintain high levels of safety can result in a number of negative outcomes, including:

- finances and penalties for breaches of safety laws;
- liability payments and costs to employees or third parties arising from injury or damage;
- exclusion from certain market sectors deemed important for future development of the business (such as medical gases);

damage to reputation.

BOC operates in over 50 different countries and is therefore exposed to economic, political and business risks associated with international operations

BOC's overall success as a business with global operations depends, in part, upon its ability to succeed in differing economic, political and business conditions. BOC encounters different legal and regulatory requirements in numerous jurisdictions. These include taxation laws, environmental regulations, regulations concerning operational standards and competition laws. BOC is also confronted by political risks such as the expropriation of assets and the inability to export currency. The business risks and challenges faced in each geography include the need to manage credit risks of local customers, appointing and retaining key staff, general economic conditions locally and currency fluctuation. Recognition of changing market conditions in local geographies is critical to BOC's long-term success. In addition, BOC's operations are exposed to varying degrees of natural catastrophe risk, such as earthquake and flood, as well as security risk, in the different countries in which BOC operates.

BOC relies on development of, or access to, technology to support business growth

BOC's success is dependent in part on its continued investment in technology to develop new products and services across all businesses, new applications for existing products or to design effective means for producing industrial gases. Failure to access or develop technology or anticipate, manage or adopt technological changes in operations or product applications on a timely basis will have a material impact on BOC's future results. For example, the rapid development of technology in the semiconductor sector requires BOC Edwards to be aware of changes in customer technology requirements and to introduce new products to meet those requirements in a timely manner. Failure to do so could result in reduced market share and profitability.

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Risk factors

BOC operates in a highly competitive environment

The industrial gases market is very competitive, with several large competitors and a significant number of smaller local competitors in different territories. Although the current trend in the industry is to seek price increases for industrial gases, the industry has experienced falling prices in previous years. There is no guarantee that the current trend will continue and there is a risk that competitors will seek to maintain or increase market shares by reducing prices. These price reductions would result in lower revenues, profits and cash flows.

Recognising and anticipating changes in the manufacturing economy is key to BOC's success

BOC's industrial gas businesses serve a wide range of manufacturing customers in major geographies such as the US, UK, Japan and Australia. This is particularly true of the Industrial and Special Products (ISP) line of business which provides products and services to customers involved in the welding and cutting of metal, a major source of revenue for this division. As customers in these traditional manufacturing-based economies seek to move their manufacturing operations to lower cost territories in, for example, Asia and Latin America, the risk arises that BOC's operations in the major geographies will have lower growth opportunities. Failure to recognise these trends and manage the consequences, through the development of alternative markets and/or meeting demand in higher growth territories, could have a negative impact on future Group results.

BOC's success depends to a significant extent on its key personnel and employees

BOC's performance depends on the skills and efforts of its employees and management team across all of its businesses. BOC recognises that failure to attract new talent and retain existing expertise, knowledge and skills in operations, products and infrastructure areas such as information technology could have a negative impact on revenues and profits. In addition, the success of BOC's acquisitions may depend, in part, on BOC's ability to retain management personnel of acquired companies.

Litigation may have an adverse impact on financial results

The global nature of BOC's business exposes it to the potential for litigation from third parties. From time to time BOC is involved in lawsuits resulting from current and past operations or products. The outcome of these lawsuits may result in damages and awards which could have a material impact on BOC's profitability, its business operations or financial condition. Examples of litigation in the US for past products include allegations of injury arising from the use of welding electrodes previously manufactured by a BOC subsidiary in the US.

Increased energy costs could reduce profitability

The production of industrial gases requires significant amounts of electrical energy. Energy costs are a key component of the cost of manufacturing industrial gases, and increases in these costs can impact profitability if they cannot be passed on to customers. Accurately predicting trends in energy costs is difficult to achieve as energy costs are to a large extent subject to factors beyond the company's control – for example, political conditions in oil producing regions. BOC also operates large fleets of commercial vehicles in certain major geographies. An increase in energy costs associated with the use of these commercial vehicles may negatively impact profit levels.

Implementation of computer software systems is a key success factor for BOC

The introduction of software to improve efficiency and effectiveness of various business processes is an important contributor to BOC's growth strategy. Failure to design, select appropriate suppliers or implement such systems effectively could result in reduced levels of customer satisfaction or profitability.

Further consolidation between major competitors may impact BOC's competitive position

A merger between any of the major competitors to BOC within the principal geographies subject to competition authority consent, could result in a longer-term deterioration of BOC's competitive position and reduced levels of growth. Possible consequences could include:

- an uncompetitive cost base for large projects;
- an inability to participate in further consolidation due to competition concerns;
- retention and/or recruitment of key personnel;
- weakened geographical positions.

Managing joint venture relationships is a key success factor for BOC

BOC needs to ensure that the selection of joint venture partners in new ventures and the relationships with partners in existing relationships is managed effectively to ensure the full potential for the joint venture is achieved. Failure to achieve alignment of objectives and manage relationships effectively may negatively impact future growth and profit levels.

OPERATING REVIEW

Introduction

The Group's results are prepared under UK Generally Accepted Accounting Principles (GAAP) and comply with UK Companies Act requirements. While the UK GAAP reporting basis provides the core information for users of this report and accounts to understand the financial performance of the Group, management believes that users will be assisted in understanding the performance relative to previous periods by presenting the results in an alternative manner. This presentation isolates the impact of currency movements from year to year and eliminates the impact of exceptional or non-recurring items. This is consistent with the basis used by management to measure performance of the business and is a component of variable compensation plans. The elements of this alternative presentation are described in more detail below.

Impact of currency movements

The Group has operations in some 50 countries around the world and the majority of its profit is generated outside the UK. Results of overseas operations are translated at the average rates of exchange against sterling for the year. Changes in such rates from year to year can significantly affect the Group's results when these are presented in pounds sterling. In some cases, such changes may make it difficult to understand underlying business performance trends without providing additional information. For example, the average value of the South African rand to pounds sterling changed by ten per cent in 2004 compared with 2003. When looking at the financial performance of the Afrox hospitals business segment in 2004, it is therefore important to highlight this currency impact to users of the information.

Consequently, management has for many years monitored business performance on a constant currency basis. This basis eliminates the impact of changes in the rates of exchange used to translate the results of overseas businesses into sterling by retranslating the results of the comparative year at the rates of exchange used in the current year. This is the basis for all internal management reporting throughout the year.

In this operating review, the comparison of financial performance between years may in places be referred to as on this constant currency basis. Comments on all segmental performance are on a constant currency basis.

The impact of changes in the rates of exchange used to translate the results of overseas businesses into sterling is shown in the table below.

	2002 results (as reported) £ million	Impact of movements in currency £ million	2002 results (at 2003 rates of exchange) £ million	2003 results (as reported) £ million	Impact of movements in currency £ million	2003 results (at 2004 rates of exchange) £ million
Turnover (including share of joint ventures and associates)						
Process Gas Solutions	1,200.6	(50.5)	1,150.1	1,242.7	(71.1)	1,171.6
Industrial and Special Products	1,605.3	(5.0)	1,600.3	1,751.2	(19.6)	1,731.6
BOC Edwards	688.2	(30.3)	657.9	684.1	(39.4)	644.7
Afrox hospitals	259.0	46.9	305.9	353.4	41.4	394.8
Gist	264.8	(0.1)	264.7	291.8	(0.1)	291.7

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Total	4,017.9	(39.0)	3,978.9	4,323.2	(88.8)	4,234.4
Operating profit						
Process Gas Solutions	161.2	(6.6)	154.6	177.1	(10.3)	166.8
Industrial and Special						
Products	229.3	2.1	231.4	238.2	3.1	241.3
BOC Edwards	(1.4)	(0.8)	(2.2)	7.9	(1.1)	6.8
Afrox hospitals	29.7	5.4	35.1	46.1	5.4	51.5
Gist	25.5	0.3	25.8	29.2	0.1	29.3
Corporate	(18.7)	0.4	(18.3)	(59.9)	6.1	(53.8)
Total	425.6	0.8	426.4	438.6	3.3	441.9
Adjusted operating profit						
Process Gas Solutions	185.2	(7.1)	178.1	184.0	(10.5)	173.5
Industrial and Special						
Products	248.0	2.0	250.0	242.7	2.8	245.5
BOC Edwards	26.1	(1.0)	25.1	18.5	(1.5)	17.0
Afrox hospitals	29.7	5.4	35.1	46.1	5.4	51.5
Gist	25.5	0.3	25.8	29.2	0.1	29.3
Corporate	(14.4)	0.4	(14.0)	(14.9)	1.5	(13.4)
Total	500.1		500.1	505.6	(2.2)	503.4

Exceptional or non-recurring items

Management believes that to present the results of the Group in the most meaningful way, items of an exceptional nature should be separately identified and disclosed. This enables users of the information to have a better understanding of underlying business performance. Examples of such items in 2004 include the loss on disposal of the packaged gas business in the US, costs relating to the subsequent restructuring of the remaining US business and charges relating to the integration process in Japan that began in 2003 following the merger of the industrial and medical gases businesses there of BOC and Air Liquide to form Japan Air Gases. Included in 2003 was a litigation settlement expense, the costs of the business initiative programme announced in August 2001, other restructuring programmes and charges relating to the integration in Japan.

Operating review

Exceptional items include those items classified as both operating and non-operating under UK GAAP.

The review of results excluding exceptional items is part of the normal internal management reporting process. The growth in operating profit excluding exceptional items is also one of the measures used in the variable element of the senior management compensation scheme.

Further information regarding the exceptional items is given in the financial review on page 49. An analysis of all operating and non-operating exceptional items is given in note 2 b) to the financial statements on page 89.

In this review, the adjustments to eliminate exceptional items have been made to operating profit (both Group and by segment), profit before tax and earnings per share. Exceptional items are commented on in the Group results section as well as in the individual business segments to which they relate. A reconciliation of these adjusted items to the equivalent UK GAAP measure is shown in the profit and loss account on page 78. When any results or measures used in this review have been adjusted to exclude exceptional items, they are referred to as 'adjusted'.

Within the individual business segments of the operating review, operating exceptional items are commented on separately. Comments on other aspects of financial trends and performance are based on adjusted operating profit. This provides more meaningful comment on underlying business performance.

A reconciliation of adjusted operating profit to operating profit is given in the table below.

	2004			2003			2002		
	Adjusted operating profit	Operating profit	Adjusted Operating profit	Adjusted Operating profit	Operating profit	Adjusted Operating profit	Operating profit	Adjusted Operating profit	Operating profit
	£ million	£ million	£ million	£ million	£ million	£ million	£ million	£ million	£ million
Process Gas Solutions	190.3	(0.8)	189.5	184.0	(6.9)	177.1	185.2	(24.0)	161.2
Industrial and Special Products	269.5	(15.6)	253.9	242.7	(4.5)	238.2	248.0	(18.7)	229.3
BOC Edwards	47.8	(1.0)	46.8	18.5	(10.6)	7.9	26.1	(27.5)	(1.4)
Afrox hospitals	59.8		59.8	46.1		46.1	29.7		29.7
Gist	25.1		25.1	29.2		29.2	25.5		25.5
Corporate	(15.6)		(15.6)	(14.9)	(45.0)	(59.9)	(14.4)	(4.3)	(18.7)
Total Group	576.9	(17.4)	559.5	505.6	(67.0)	438.6	500.1	(74.5)	425.6

Other non GAAP measures

This review also presents return on capital employed (ROCE) and adjusted return on capital employed. Adjusted return on capital employed removes exceptional items from the measure of operating profit used in the calculation. Adjusted return on capital employed is used by management for reasons similar to those described above.

A reconciliation of these two measures is shown below.

	2004			2003 (restated)			2002 (restated)		
	Operating profit	Average capital employed	Operating ROCE	Operating profit	Average capital employed	Operating ROCE	Operating profit	Average capital employed	Operating ROCE
	£ million	£ million	%	£ million	£ million	%	£ million	£ million	%

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Adjusted ROCE	576.9	3,752.4	15.4	505.6	4,010.5	12.6	500.1	4,002.9	12.5
Operating exceptional items	(17.4)			(67.0)			(74.5)		
ROCE	559.5	3,752.4	14.9	438.6	4,010.5	10.9	425.6	4,002.9	10.6

1. ROCE is operating profit as a percentage of the average capital employed excluding net pension liabilities.
2. Average capital employed and ROCE for 2003 and 2002 have been restated following the application of UK GAAP UITF37 and UITF38 in 2004 (see note 31 to the financial statements).

The Group commentary in this review also comments on free cash flow. Free cash flow is a measure often referred to by BOC management and other users of financial information to highlight the cash flow available from underlying ongoing business operations before acquisition and disposal activity. Whether or not this remains positive over time is an indicator that dividends to shareholders are being paid out of cash generated by existing Group businesses. As such it is a useful additional measure of financial performance.

A reconciliation of this measure to the nearest equivalent UK GAAP measure, net cash flow, is shown below.

	2004	2003	2002
	£	(restated)	(restated)
	million	£ million	£ million
Free cash flow	257.9	141.8	166.5
Exceptional cash items	(11.9)	(28.3)	(67.3)
Acquisitions and disposals	92.5	(118.3)	(215.5)
<i>Other items within capital expenditure and financial investment:</i>			
Purchases of intangible fixed assets	(0.2)	(1.2)	(0.1)
Net (purchases)/sales of current asset investments	(0.9)	16.6	4.3
Purchases of trade and other investments	(3.8)	(3.3)	(19.7)
Sales of trade and other investments	5.6	5.3	0.9
Net cash inflow/(outflow) before use of liquid resources and financing	339.2	12.6	(130.9)

OPERATING REVIEW (COMPARING 2004 WITH 2003)**Turnover, including share of joint ventures and associates****Profit before tax****Group**

Turnover including the Group share of joint ventures and associates was £4,599.3 million in 2004, up six per cent compared with £4,323.2 million in 2003. Operating profit was £559.5 million, up 28 per cent compared with £438.6 million in 2003. After charging operating and non-operating exceptional items totalling £92.0 million and net interest and other financing items of £72.6 million, profit before tax was £412.3 million, up 17 per cent compared with £351.9 million in 2003. Earnings per share were 53.5p, up 20 per cent compared with 44.5p in 2003. Excluding the exceptional items, adjusted operating profit for the year was £576.9 million, adjusted profit before tax was £504.3 million and adjusted earnings per share were 63.2p.

Comparisons with 2003 are affected by exchange rate movements. For the currencies that principally affect the Group's results, movements in the Australian dollar and the South African rand were favourable and movements in the US dollar and Japanese yen were adverse. If the results of a year ago had been translated at the rates applied to this year, turnover would have been reduced by £88.8 million. There would have been an increase in operating profit of £3.3 million and a decrease in adjusted operating profit of £2.2 million. Adjusted profit before tax would have been £2.9 million higher and adjusted earnings per share would have been 0.2p lower.

The table set out below summarises results reported both under UK GAAP and as adjusted. Results for 2003 are shown both as reported in that year and on a constant currency basis.

	2004	2003	2003 (at 2004 exchange rates) ¹
Turnover including share of joint ventures and associates (£ million)	4,599.3	4,323.2	4,234.4
Operating profit (£ million)	559.5	438.6	441.9
Adjusted operating profit (£ million) ²	576.9	505.6	503.4
Profit before tax (£ million)	412.3	351.9	360.3
Adjusted profit before tax (£ million) ²	504.3	418.9	421.8
Earnings per share	53.5p	44.5p	44.9p
Adjusted earnings per share ²	63.2p	52.9p	52.7p

1. A reconciliation of turnover, operating profit and adjusted operating profit for 2003 at 2003 and at 2004 rates of exchange is shown on page 34.
2. A reconciliation of adjusted results with UK GAAP results is shown on page 35 and in the profit and loss account on page 78.

Exceptional items in 2004 amounted to a charge of £92.0 million. This comprised a loss of £79.5 million on disposal of the US packaged gas business, a charge of £14.8 million for restructuring the remaining business in the US following the disposal, a charge of £2.6 million relating to the integration of the industrial and medical gases businesses of BOC and Air Liquide in Japan, and a profit of £4.9 million on the disposal of fixed assets.

Exceptional items in 2003 comprised £43.2 million for a litigation settlement, costs of £15.5 million for completion of restructuring programmes and £8.3 million relating to the integration of the BOC and Air Liquide businesses in Japan.

Adjusted return on capital employed for the year to 30 September 2004 was 15.4 per cent. Return on capital employed for the year to 30 September 2004 was 14.9 per cent. Free cash flow (as defined on page 35) was £257.9 million in 2004. Net cash flow, after acquisitions, disposals and other investing activities, and including exceptional cash items, was £339.2 million in 2004. A reconciliation of these measures is shown on page 35.

A first interim dividend for 2004 of 15.5p per share was paid in February 2004 and a second interim dividend of 24.5p per share was paid in August 2004. In aggregate this was a 2.6 per cent increase over the annual dividend of the previous year. A first interim dividend for 2005 of 15.9p per share has been declared for payment in February 2005.

Capital expenditure by subsidiaries (including interest capitalised) was £256.1 million in 2004, compared with £281.2 million in 2003. This was covered by cash inflow from operating activities. Capital expenditure by joint ventures and associates was £109.0 million in 2004, of which the BOC share was £49.2 million. Equivalent expenditure in 2003 was £81.4 million, of which the BOC share was £36.1 million. The Group also made acquisitions of businesses of £50.9 million in 2004 and proceeds from disposals were £98.3 million. Equivalent items in 2003 were £135.5 million and £3.9 million respectively.

Process Gas Solutions (PGS)

	2004	Change on 2003 ¹	Change (constant on 2003 currency)
	£ million	2003	
Turnover	1,275.2	+3%	+9%
Operating profit	189.5	+7%	+14%
Adjusted operating profit ²	190.3	+3%	+10%

1. A reconciliation of results for 2003 at 2003 and at 2004 rates of exchange is shown on page 34.
2. A reconciliation of adjusted operating profit with operating profit is shown on page 35.
3. All comments below are on a constant currency basis.

Increased turnover reflected strong demand worldwide for both steel and non-ferrous metals. In addition, sales from new production facilities accounted for approximately £14 million of the increase in turnover between 2003 and 2004. The principal facilities coming into production in 2003 and 2004 were hydrogen and carbon monoxide plants supplying TPCC at Map Ta Phut, Thailand, and Citgo's refinery at Lemont, Illinois.

Metal production increased in 2004 and world metal prices firmed as a result of strong demand from China. This benefited BOC's steel and non-ferrous metal customers in all the key markets throughout the year.

For 2004 as a whole, the food sector was buoyant outside the US despite the temporary consequences of avian flu in Asia and the imposition of US import tariffs on prawns. In October 2004, a new plant to produce beverage grade carbon dioxide was commissioned in Pakistan to satisfy growing demand for carbonated drinks.

Operating review (comparing 2004 with 2003)

The recovery in the electronics packaging industry created exceptionally strong demand for industrial gases in the electronics packaging sector. BOC was a leading beneficiary of this because of its strong position in Asian markets. The EcoSnow business that was acquired in 2003 performed strongly in 2004 and contributed to the growth of the PGS business in the electronics packaging sector.

Several significant new supply scheme contracts were won in 2004. BOC's hydrogen business with refiners will be substantially increased with a new plant to supply both a Sunoco refinery at Toledo, Ohio, and a nearby BP refinery. The hydrogen will be used by both BP and Sunoco in the production of ultra-low sulphur gasoline and diesel fuels. The complex will be capable of supplying over 120 million standard cubic feet a day of hydrogen. BOC's partner for engineering and construction is Linde BOC Process Plants of Tulsa, Oklahoma. BOC is investing more than US\$100 million in the facility, which is currently scheduled to be completed early in 2006.

Outside the US, significant new business in the chemical sector was won with the Sinopec Shanghai Petrochemical Company. BOC will form a joint venture to invest in existing assets and then add further air separation capacity. BOC's subsidiary in Thailand is to invest in a venture establishing a 1,300 tonnes-a-day plant to supply TOC Glycol Co. Ltd. (TOCGC) in Map Ta Phut and to increase merchant capacity in the area. When completed early in 2006, this will be the largest air separation unit in Thailand. It will be owned and operated by a joint venture between BOC's Thai subsidiary (TIG) and Bangkok Industrial Gas Company.

New business with steel customers was mainly concentrated in Asia. In January 2004, BOC announced that its joint venture with the Taiyuan Iron and Steel Company (TISCO) would expand its existing 1,500 tonnes-a-day capacity with the construction of two new 1,400 tonnes-a-day air separation units. TISCO is already the largest stainless steel producer in China and its expansion to a capacity of 900,000 tonnes a year will make it one of the biggest in the world. In China's Pearl River delta, BOC's associated company is to expand capacity to supply the Guangzhou Iron and Steel Company and is also adding new air separation capacity to supply the Zhujiang Iron & Steel Corporation.

In the UK, BOC supplies Corus at its Port Talbot, Scunthorpe, Rotherham and Redcar plants. BOC is to increase its industrial gases supply to the Port Talbot strip products plant by 30 per cent to increase steel production locally.

Selling prices were generally firm during 2004 and sufficient to offset input cost inflation except in parts of north Asia. Increases in fuel and power costs taking effect at the end of 2004 will require further selling price increases to maintain margins. The expiry of a fixed term contract in the UK will cause a particularly sharp increase in UK power costs in 2005.

Operating exceptional items in 2004 were for the integration of the industrial and medical gases businesses of BOC and Air Liquide in Japan that began in 2003.

Europe Turnover increased in all parts of Europe except for Ireland. Adjusted operating profit increased significantly, mainly as a result of more efficient plant operation and careful control of costs.

In the UK, manufacturing activity remained generally weak but customer closures and relocations that had affected business in 2003 were less evident in 2004. Rising steel production led to increased demands for oxygen. The reorganisation of steel processing at Corus will lead to a 30 per cent increase in gases supply for steel production at Port Talbot from the end of 2005.

A new operations centre was established in Poland during 2004 and adjusted operating profit increased through efficiency savings derived from better operational control. Cost savings following the outsourcing of carbon dioxide distribution also led to increased adjusted operating profit in Ireland.

Price increases were generally sufficient to cover higher input costs in 2004. Further increases are being implemented in 2005 to cover sharply higher electricity prices in the UK following the expiry of a fixed price supply contract.

Cryostar manufactures cryogenic pumps, expansion turbines and compressors for a variety of industrial gas applications and for marine liquefied natural gas (LNG) tankers. As in 2003, turnover and adjusted operating profit increased in 2004 principally as a result of demand for shipboard compression units on LNG tankers and following continued investments for gases plants in Asia.

North America Turnover increased as a result of including a full year of syngas production for Celanese at Clear Lake, Texas and the start-up of a new plant supplying hydrogen to Citgo's refinery at Lemont, Illinois, in October 2003.

Adjusted operating profit was lower as a result of reduced carbon dioxide volumes to our food and dry ice customers, and reduced argon demand from the stainless steel and wholesale sectors.

In general, demand for industrial gases from steel customers was strong in 2004. Liquid nitrogen volumes for food freezing applications strengthened during the year, mitigating the reduced carbon dioxide volumes into this sector. BOC's carbon dioxide business with beverage customers continued to make good progress in 2004 and new business was won.

Selling prices remained generally firm and significant increases in fuel and energy costs were largely recovered with surcharges or general price rises.

Latin America Revenues increased across the region during 2004, although business in Venezuela continued to be affected by political uncertainty. In Brazil, BOC's new 400 tonnes-a-day plant entered production serving CST, the world's biggest producer of slab steel.

The benefits of re-pressurising the Pemex Cantarell oilfield in the Gulf of Mexico with nitrogen from BOC's joint venture company continued to be realised during the year. Pemex attributes an increase of some 600 thousand barrels a day in oil production to the nitrogen injection. Plant reliability was further improved during 2004 leading to some increase in supply. In May 2004 BOC agreed to buy Duke Energy's 30 per cent ownership interest in the joint venture company for US\$59.7 million in cash. This increased BOC's overall stake to 65 per cent on completion in September 2004.

Operating review (comparing 2004 with 2003)

Africa Turnover increased and adjusted operating profit was further improved by cost savings and firm pricing trends leading to better margins. Although the stronger rand adversely affected platinum and gold mining in 2004, strong demand and firmer prices led to increased activity in the steel industry. New business was obtained for carbon dioxide in the beverage sector and for the use of oxygen in the de-lignification of wood pulp.

Japan The combination of BOC's and Air Liquide's industrial and medical gases businesses in Japan took effect from January 2003. This distorts the comparison of turnover and profit for BOC's three lines of business between 2004 and 2003 and with earlier years. The results of Japan Air Gases were consolidated on an equity basis throughout 2004 and for the last three quarters of 2003. In 2004 turnover increased mainly as a result of equipment sales and adjusted operating profit increased faster as a result of achieving integration cost savings as planned.

North Asia Turnover and adjusted operating profit increased in 2004 but at a more modest pace than in 2003. Production plants across the region were almost fully utilized and little new capacity came on stream in 2004. However a number of new plants will add significantly to production within the next 12 months.

In China, turnover and adjusted operating profit increased in line with economic trends but further growth was constrained by available production capacity and by some unplanned shutdowns, mainly at customers' plants. Management expects that new production capacity to be added over the next 12 months will more than double BOC's capacity in China. Four large air separation plants are under construction to supply petrochemical and steel customers and a further five nitrogen generators will supply a variety of customers in the electronics and metals markets.

In addition to the expansions at Taiyuan and Nanjing covered in the operating review last year, BOC has more recently announced a new joint venture with Sinopec Shanghai Petrochemical Company Limited (SPC), a subsidiary of Sinopec Corporation, to meet the industrial gases needs of SPC in the Jinshan District of Shanghai. The joint venture expects to invest in the production of nearly 3,000 tonnes a day of air separation capacity initially through the acquisition of SPC's existing industrial gases assets followed by the construction of a new world-scale air separation unit (ASU). This will support SPC's fast growing petrochemical business and those of additional customers in the area. The Jinshan District is one of the major areas of petrochemical investment in China and, aside from the SPC complex, includes the nearby Shanghai Industrial Chemical Park, where a number of global and local chemical companies are located.

Economic conditions were stable in Korea but increased turnover and adjusted operating profit came from some additional argon and hydrogen capacity to supply customers near Pohang.

The relocation of labour-intensive manufacturing from Taiwan to mainland China that had provided a difficult economic background in 2003 slowed in 2004. Turnover increased as a result of full capacity utilization but adjusted operating profit increased significantly as a result of improved efficiency in plant operations.

Hong Kong also enjoyed a better economic climate in 2004 for the same reasons and adjusted operating profit was sharply better.

South and South East Asia These regions came under the same business unit management during 2004. The economies continued to be buoyant across both regions during the year, helped by generally strong steel demand and a more active electronics industry in Singapore, Malaysia and the Philippines. The major market sectors for PGS across the region are steel, petrochemicals and the food industry.

The SARS infection that had adversely affected 2003 was no longer an issue in 2004 but in Thailand and Malaysia the food sector was hit by an outbreak of avian flu. The Thai shrimp industry was further affected by the imposition of US tariffs on imports but some recent relaxation of these should lead to better conditions in 2005. During 2004, BOC began to manufacture food-freezing equipment in Thailand.

Turnover increased in 2004 and adjusted operating profit was significantly better with improved margins arising from business efficiency and productivity gains. Additional carbon dioxide capacity was added to serve beverage industry customers in Pakistan in October 2004.

Although there were few new petrochemical projects started in 2004, demand for industrial gases increased as a result of de-bottlenecking existing facilities. In September 2004, BOC's subsidiary in Thailand announced a major investment in new joint venture air separation capacity to supply oxygen for ethylene glycol production and to increase the availability of products for sale in the expanding merchant market around Map Ta Phut. During 2005 additional air separation capacity will be added at Hyderabad by BOC's Indian subsidiary to support growing demand for merchant products in the area.

South Pacific Turnover and adjusted operating profit were higher than a year ago. The Australian and New Zealand economies remained generally strong in 2004. The strength of local currencies led to some further customer plant closures but firm commodity prices for minerals and particularly for steel enabled leading customers to prosper. There was some increase in tonnage volumes but volumes overall were similar to a year ago.

Electricity prices increased in eastern Australia and more so in New Zealand. Increased costs were passed through to tonnage customers and progressively recovered in the merchant markets. At the same time, BOC's major plants in Australia achieved significant cost savings as a result of implementing a global plant optimisation programme.

During 2004 BOC outsourced the transport of its bulk products to Australia's leading transport company, while retaining control of distribution and scheduling. This change was made only after ensuring that there would be no diminution of safety standards or the quality of service to customers.

A hydrogen purification plant and bus re-fuelling facility to support BP in the Government of Western Australia's environmentally friendly fuel cell bus trial came into operation during September 2004. Three hydrogen-fuelled buses will be operating in the city of Perth. The trial is to continue for at least the next two years.

Operating review (comparing 2004 with 2003)

Water services BOC acquired Environmental Management Corporation (EMC), a US water services company in October 2002. Turnover increased modestly in 2004 but the business remained close to break-even after the amortisation of goodwill as a result of planned costs to increase business development resources.

BOC's strategy for water services is to focus on its industrial customers. Significant new business was won during 2004, including a multi-year contract for process and waste water services to a major US beef producer. Tightening regulations for proteins in effluent seem likely to create fresh demands for water treatment in the food industry.

Industrial and Special Products (ISP)

	2004	Change	Change on 2003 ¹ (constant currency)
	£ million	on 2003	
Turnover	1,782.3	+2%	+3%
Operating profit	253.9	+7%	+5%
Adjusted operating profit ²	269.5	+11%	+10%

1. A reconciliation of results for 2003 at 2003 and at 2004 rates of exchange is shown on page 34.
2. A reconciliation of adjusted operating profit with operating profit is shown on page 35.
3. All comments below are on a constant currency basis.

Nearly all regions delivered better results in 2004 with increased turnover in most countries and an overall improvement in operating margin. Robust economic conditions supported a further improvement in the south Pacific region and Africa delivered better results despite the handicap of the stronger currency on manufacturing and mining. There was also some improvement in the US manufacturing economy.

At the same time further progress was made in successfully integrating the businesses recently acquired in Canada and Poland.

Sales to the medical sector grew further in 2004 as a result of both gases and liquid helium sales. Heliox, a new low-density breathing mixture was introduced in the UK and in Australia. This product enables patients with obstructed airways to breathe more easily and thereby provides time to treat the underlying problems. Helium is also used to cool the coils of superconducting magnets in MRI scanners. BOC not only sells the liquid nitrogen and helium cryogenics but offers a related CryoFill service, taking responsibility for filling customers' magnets. Helium sales also increased in Taiwan, Thailand and China, where significant growth potential has been identified and where an important distributor agreement was signed with Meike. The cost of producing and purchasing helium continued to increase rapidly during 2004 but BOC was largely successful in recovering higher costs in selling prices to customers. BOC installed helium recovery systems at the University of Liverpool in the UK and at Trane in the US during 2004.

Consistent progress was made in growing refrigerant sales. The alliance with Hudson Technologies for the reclaim of contaminated refrigerants began operation in the UK during 2004 and will be applied in South Africa in 2005.

BOC's major liquefied petroleum gas (LPG) businesses in Australia and South Africa were notably successful in managing volatile input costs and sustaining margins during 2004 as LPG prices increased sharply.

Sales of industrial products increased in aggregate although some developed markets continued to reflect weak manufacturing activity. Business development was helped by upgrading the retail environment of outlets in some

major markets and by the continued introduction of safety products to the markets in the UK, Australia and South Africa.

Operating exceptional items in 2004 were for the integration of the industrial and medical gases businesses of BOC and Air Liquide in Japan that began in 2003, as well as for the restructuring of the ISP business in the US following the disposal of the packaged gas business.

Europe Turnover and adjusted operating profit increased further in 2004. Manufacturing activity continued to decline in the UK but BOC maintained a strong position in the market. Improved service levels enabled selling price increases to be implemented. At the same time costs were reduced through improved productivity.

Modest increases in industrial product sales were helped by rejuvenation of retail outlets in the UK. Medical product sales increased as a result of gaining additional National Health Service business and continued demand for lightweight oxygen cylinders. The range of lightweight cylinders will be expanded by introducing additional sizes during 2005.

Changes in the provision of domiciliary oxygen in England and Wales are to be implemented by the National Health Service during 2005. A single contractor will be chosen in each one of 11 regions to supply all forms of domiciliary oxygen to patients. BOC currently has a leading share of the cylinder oxygen business but is a minor supplier of oxygen concentrators.

The new business supplying helium to Oxford Magnet Technology for medical imaging devices began in 2003 and performed well throughout 2004. It was also the first full year of the refrigerant reclaim service in the UK, based on an exclusive global licence with Hudson Technologies. A range of gases for scientific applications was introduced during the year and some additional sales were generated following the launch of a mail order catalogue for gases and related products. BOC's Sureflow beverage dispense gas operation was expanded by new business for Heineken outlets in Ireland during 2004.

BOC's business in Poland was enlarged from February 2003 with the acquisition of Praxair's Polish business. 2004 was therefore the first full year of the expanded business and there were further integration benefits.

North America The BOC Group announced on 27 January 2004 that it had signed a letter of intent to sell its US packaged gas business to Airgas. This business had turnover of approximately US\$240 million in 2003. The disposal was completed on 30 July 2004 upon receipt of initial cash proceeds of US\$175 million.

Operating review (comparing 2004 with 2003)

Following this transaction, the ISP business in north America consists of bulk medical gases, bulk supplies to distributors, tube trailer and liquefied helium in the US as well as the Canadian packaged gas business. In total these elements currently generate turnover of some US\$450 million a year.

The impending disposal of the US packaged gas business created a challenging business environment for a significant part of the year. US sales volumes and adjusted operating profit were lower in the period prior to the disposal.

Turnover increased in Canada principally as a result of the acquisition of Air Products Canadian gases and related products business with effect from April 2003. Cost synergies arising from the integration further boosted adjusted operating profit in 2004.

Latin America Turnover increased significantly and margins improved. Growth across the region was driven principally by sales of medical products supplemented by sales of BOC-branded cutting and welding equipment. Sales of packaged chemicals increased in Colombia and Venezuela.

Results improved strongly in Venezuela, despite a continuation of political unrest. BOC's associated company achieved better results in Chile but there was a sharper improvement in Argentina.

Selling price increases offset inflation in Venezuela and Chile but the trends were less favourable in Colombia during 2004. A new customer service centre was opened in Venezuela and new business systems were successfully implemented in Venezuela and Colombia during the year.

Africa Important sections of South African industry were depressed during 2004 because of the stronger currency. Rand exchange rates reduced the profitability of gold mining and manufacturing for export in particular. At the same time the cost of imported goods was lowered making them more competitive with those manufactured locally. However lower interest rates began to stimulate domestic consumption towards the end of the year.

Despite the more difficult market conditions, adjusted operating profit improved significantly on the basis of a modest improvement in turnover. Margins improved as a result of better productivity and operating efficiency, partly offset by increased transport costs arising from the temporary shutdown of some key supplier facilities. Sales of cutting and welding products increased in South Africa and so did both the sales volume and the turnover of liquefied petroleum gas (LPG). Turnover of special products, including refrigerants, grew particularly rapidly.

Export sales of welding products manufactured by Afrox, BOC's South African subsidiary, also increased significantly. There was a modest improvement in adjusted operating profit despite the currency disadvantage. Sales of the AfroxPac emergency oxygen kit for underground miners were substantially lower in 2004 as order intake reflected weak activity in the gold mining sector.

During 2005 the Afrox refrigerants business is projected to expand by offering a service to recover and reclaim the contents of customers' refrigeration plant. This service will be provided on-site if required and will be based on technology that is the subject of BOC's global alliance with Hudson Technologies.

A programme to renovate the Afrox retail network in South Africa with the development of a number of Gas & Gear outlets and a range of safety products is under way. In addition a range of diving gases and a fire suppression product have been launched in South Africa.

Good progress was made in growing both turnover and adjusted operating profit in the other southern African countries during 2004. A new carbon dioxide plant supported growth in Nigeria.

Japan The basis of accounting for BOC's business in Japan changed during 2003 as a result of a merger. Full details can be seen in the PGS section on page 38. In 2004 ISP's turnover in Japan was slightly less than the previous year but adjusted operating profit was higher through cost savings following the merger and from some asset disposals.

South and South East Asia These regions came under the same business unit management during 2004. In aggregate there were modest improvements in both turnover and adjusted operating profit. In Taiwan, buoyant activity in manufacturing and infrastructure development was reflected in higher turnover and adjusted operating profit. There were also sharply better results from the industrial products business in Thailand but ammonia margins were under strong competitive pressure and liquefied petroleum gas (LPG) selling prices remained subject to restrictive regulation. Hong Kong continued to be affected by the migration of manufacturing to mainland China and in Singapore shipbuilding and construction activity failed to improve in 2004. Competition intensified in the Malaysian market for industrial gases. Demand for helium was strong throughout Asia.

In south Asia, turnover increased and adjusted operating profit was further boosted by an asset disposal. Trading conditions in Bangladesh were adversely affected by a combination of political uncertainty, strikes and floods.

South Pacific Turnover and adjusted operating profit increased in 2004 and margins were improved by holding down costs. The economic environment remained favourable across the region. Manufacturing activity was buoyant in Australia despite a challenging environment for export-oriented manufacturers created by the stronger currency. New projects in the oil and gas sector and in mining generated increased demand for welding and safety products. During 2004 BOC secured major contracts with Western Mining to meet its requirements for safety products across Australia.

The economy also continued to grow in New Zealand but somewhat less rapidly than in Australia. There was also an improvement in the Pacific Islands, while gold mining activity and oil refining investment led to increased business in Papua New Guinea.

Major initiatives in 2004 included an agreement with the Australian CSIRO to commercialise ethanedinitrile, a gas that can be used to sterilize soil and timber, and which management believes has significant potential. The acquisition of OccCorp, an injury management provider, gives BOC entry to a largely untapped market by combining BOC's safety services and products.

Operating review (comparing 2004 with 2003)

A dedicated refrigerant reclaim fleet was established to help customers comply with new refrigeration regulations that make it mandatory to recover, return and safely dispose of hydrofluorocarbons. BOC's new Heliox gas mixture, which helps the treatment of patients with airway obstructions, and Inhalo, the new lightweight cylinder, were both successfully launched into the medical market.

BOC commenced an extensive redevelopment program of its Gas & Gear stores, supporting traditional industrial customers and new customers alike, giving a stronger retail position, providing better visibility, higher traffic flow, attractive merchandising and design.

The price of liquefied petroleum gas (LPG) was particularly volatile during 2004. BOC's associated company in Australia, Elgas, was notably successful in preserving sales margins in these difficult circumstances and adjusted operating profit was increased. Elgas expanded through the acquisition of a leisure gas business during the year. The potential impact of Government plans to remove an excise tax exemption for automobile gas in the period from 2008 to 2012 was softened by a subsequent decision to delay the introduction by three years and by an agreement to provide capital allowances to encourage car owners to convert their vehicles to use LPG fuel. Automobile gas is a minor part of Elgas turnover.

BOC Edwards

	2004	Change	Change
	£ million	on 2003	on 2003 ¹
			(constant
			currency)
Turnover	816.5	+19%	+27%
Operating profit	46.8	+492%	+588%
Adjusted operating profit ²	47.8	+158%	+181%

1. A reconciliation of results for 2003 at 2003 and at 2004 rates of exchange is shown on page 34.
2. A reconciliation of adjusted operating profit with operating profit is shown on page 35.
3. All comments below are on a constant currency basis.

Operating exceptional items in 2004 were for the integration of the industrial and medical gases businesses of BOC and Air Liquide in Japan that began in 2003.

Conditions improved in most of BOC Edwards' key markets during 2004. Orders for semiconductor equipment began to pick up in the first quarter leading to increased sales in subsequent quarters. At the same time a major expansion of liquid crystal display (flat panel) manufacturing facilities got under way. This provided fresh business opportunities for both gases and equipment. Sales of chemical management equipment for new semiconductor fabrication plants improved only slightly and profitability continued to be affected by competitive market conditions. Demand for scientific equipment vacuum systems and for pharmaceutical packaging machines was better in 2004 but sales of vacuum systems for aerospace metallurgy applications remained at a low level.

At the beginning of 2004, high levels of capacity utilization encouraged a number of semiconductor manufacturers to add fresh capacity or upgrade existing facilities. This led to increased orders, which were reflected in higher turnover and adjusted operating profit from the second quarter onwards.

BOC Edwards was successful in winning new equipment business with the majority of semiconductor fabrication facilities for which construction began in 2004. These included several investments in Taiwan, Korea, Japan, China, Europe and the US.

New pumping and exhaust systems were introduced for semiconductor, flat panel display and other vacuum applications. A new range of iGX pumps for the semiconductor industry provides better control and monitoring capabilities and use less power than before. BOC Edwards also launched high capacity pumps of its own design and manufacture for flat panel applications. New turbomolecular and scroll pumps were designed for scientific instrumentation. Wet chemical abatement systems were introduced to expand and complement the capabilities of BOC Edwards exhaust abatement systems.

Increased production of semiconductors was reflected in better demand for electronic materials. Production of nitrogen trifluoride was expanded further in 2004 to over 100 tonnes a year. New investments in semiconductor facilities also provided opportunities for nitrogen supply contracts. BOC Edwards has become one of the leading suppliers of bulk gas to the growing semiconductor industry in China and continued to benefit from the expansion of semiconductor manufacturing in Taiwan, Japan and Singapore. New nitrogen generators were installed at several customer sites and further capacity was added to satisfy growing demand from customers within the Hsinchu science park in Taiwan.

Accelerated investment in new flat panel display production facilities led to significant orders for large capacity pumping systems in both Taiwan and Korea. Gas supply contracts were also signed with a number of display manufacturers in Taiwan and Japan. Liquid crystal display production leads to substantial demand for chamber cleaning chemicals. On-site fluorine generation equipment is now installed at a number of semiconductor and flat panel manufacturers. A full commercial-scale generator is functioning at LG Philips new sixth generation plant in Korea.

Demand for pharmaceutical freeze-drying and packaging equipment picked up in 2004 leading to better sales and adjusted operating profit. A new non-contact check-weighing machine was introduced. Nuclear magnetic resonance technology allows every package to be checked, enables packing lines to operate at higher speeds and facilitates immediate correction of any deviation from specification.

The basis of accounting for BOC's gases business in Japan changed during 2003 as a result of a merger. Full details can be seen in the PGS section on page 38. Electronic gases turnover increased significantly in 2004 as a result of the pick up in the semiconductor industry. The benefit of increased turnover on gases adjusted operating profit was amplified by synergy benefits arising from the merger.

Operating review (comparing 2004 with 2003)

Contracts were won in Asia and Europe furthering a strategy to expand the range of value-added services to electronic manufacturers. These include gases management, chemicals supply, support services and materials logistics. Other developments included an improved offering of gases and vacuum systems for lithography and supercritical carbon dioxide cleaning technology.

Afrox hospitals

	2004	Change	Change
	£ million	on 2003	on 2003 ¹
			(constant
			currency)
Turnover	432.1	+22%	+9%
Operating profit	59.8	+30%	+16%
Adjusted operating profit ²	59.8	+30%	+16%

1. A reconciliation of results for 2003 at 2003 and at 2004 rates of exchange is shown on page 34.
2. A reconciliation of adjusted operating profit with operating profit is shown on page 35.
3. All comments below are on a constant currency basis.

Adjusted operating profit increased faster than turnover as a result of careful control of overhead costs and positive pricing trends. Hospital occupancy rates remained similar to a year ago. Acquisitions were a minor factor in the turnover increase but 2004 was the first full year of ownership for Joint Medical Holdings and the Little Company of Mary hospitals. During the year Afrox Healthcare increased its holding in the Wilgeheuwel hospital from 28 per cent to 80 per cent and closed down the Cape Anaesthetic and Brackenfield surgery centres in Cape Town. It also sold its interest in the 123 bed Jan Marais hospital in Cape Town. The Lifecare chronic care facilities and Afrox occupational health services both delivered a good performance in 2004.

The change to a new reimbursement system that began during 2003 was completed in 2004. The previous system of paying health care providers a fee for their services changed to a fixed payment for each kind of procedure as well as a per-day tariff structure.

Legislative changes in South Africa may have a limited and as yet uncertain impact on the Afrox hospitals segment. A certificate of need will be required to licence health care facilities in the future to prevent oversupply in particular areas but Afrox hospitals have been exempted for at least 20 years on the basis of current utilisation. Corporate ownership of hospital and retail pharmacies is now allowed and the vast majority of Afrox facilities have now been registered accordingly. On the other hand, corporate control of pathology services may be prohibited in the future. Afrox Healthcare has minority interests in a number of pathology facilities.

In July 2003 African Oxygen Limited (Afox) announced that it was in the process of considering its strategic options with regard to its shareholding in Afrox Healthcare Limited. On 17 November 2003, Afrox announced that it had agreed to sell its entire holding in Afrox Healthcare Limited to a consortium led by two major black economic empowerment investors. In April 2004, the South African Competition Commission advised that the transaction should be approved subject to certain conditions, which were acceptable to both the buyers and the seller. The sale remains subject to approval by the South African Competition Tribunal, at which closing hearings are currently scheduled for March 2005. In addition an application has been brought in the South African High Court by two shareholders in Afrox Healthcare Limited to have the Scheme of Arrangement, by which the disposal would be implemented, declared to have lapsed. This application, which is being opposed, is currently due to be heard in the week commencing 29 November 2004.

	2004	Change	Change
	£ million	on 2003	on 2003 ¹ (constant currency)
Turnover	293.2	no change	+1%
Operating profit	25.1	14%	14%
Adjusted operating profit ²	25.1	14%	14%

1. A reconciliation of results for 2003 at 2003 and at 2004 rates of exchange is shown on page 34.
2. A reconciliation of adjusted operating profit with operating profit is shown on page 35.
3. All comments below are on a constant currency basis.

The comparison of turnover and adjusted operating profit between 2003 and 2004 is distorted by a non-recurrent item during 2003. In 2003 a gain of some £4.1 million arising principally from the termination of operations for the Marks & Spencer General Merchandise business was credited to adjusted operating profit. The termination of this business also eliminated some £26 million of turnover in 2004 compared with 2003. After adjusting for this item, underlying turnover grew principally as a result of increased food business for Marks & Spencer, as well as new contracts and the expansion of activity with Ocado and Carlsberg UK. On the same basis, adjusted operating profit in 2004 was at a similar level to 2003. A slowdown in the previous trend towards outsourcing logistics operations was a factor in pricing pressures in UK distribution and so were dislocations arising from recent consolidation in the industry.

During 2004 Gist became the logistics partner for Intergreen, the Dutch flower producer, transporting horticultural products between the Netherlands and the UK. This, and new business with regional produce suppliers, led to a doubling of activity at Gist's Lincolnshire depot.

Primary food distribution operations were also expanded in 2004 when Gist took on the transport operations of John Rannoch foods, one of the leading suppliers of poultry products to Marks & Spencer. Gist manages the complex supply chain for all of Marks & Spencer's chilled and ambient foods. During 2004, a major investment was made to expand a chilled food facility in Kent to meet the demands of the growing network of M&S Simply Food stores.

OPERATING REVIEW (COMPARING 2003 WITH 2002)

Group

Turnover including the Group share of joint ventures and associates was £4,323.2 million in 2003, up eight per cent compared with £4,017.9 million in 2002. Operating profit was £438.6 million, up three per cent compared with £425.6 million in 2002. After charging operating and non-operating exceptional items totalling £67.0 million and net interest and other financing items of £86.7 million, profit before tax was £351.9 million, up five per cent compared with £335.3 million in 2002. Earnings per share were 44.5p, up seven per cent compared with 41.4p in 2002. Excluding the exceptional items, adjusted operating profit for the year was £505.6 million, adjusted profit before tax was £418.9 million and adjusted earnings per share were 52.9p.

Comparisons with 2002 were affected by exchange rate movements. For the curre