

Report of the independent auditors

To the members of The South African Institute of Mining and Metallurgy

We have audited the annual financial statements of The South African Institute of Mining and Metallurgy set out on pages 451 to 460 for the year ended 30 June 2002. These financial statements are the responsibility of the Institute's Council. Our responsibility is to express an opinion on these financial statements based on our audit.

Scope

We have conducted our audit in accordance with statements of South African Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance that the financial statements are free of material misstatement. An audit includes:

- ▶ examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements,
- ▶ assessing the accounting principles used and significant estimates made by management, and
- ▶ evaluating the overall financial statement presentation.

We believe that our audit provides a reasonable basis for our opinion.

Audit opinion

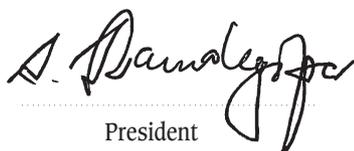
In our opinion, the financial statements fairly present, in all material respects, the financial position of the Institute at 30 June 2003 and the results of its operations and cash flows for the year then ended in accordance with South African Statements of Generally Accepted Accounting Practice.

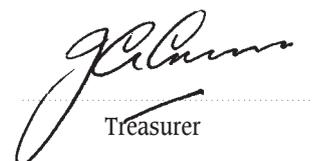
Auditors

29 July 2003

Council's approval of the annual financial statements

The annual financial statements for the year ended 30 June 2003 set out on page 451 to 460 were approved by the Council on 26 July 2002 and are signed on its behalf by:


.....
President


.....
Treasurer

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The South African Institute of Mining and Metallurgy

Balance sheet at 30 June 2003

	<i>Note</i>	2003 R	2002 R
Assets			
Non-current assets			
Furniture and equipment	<i>2</i>	218 967	72 179
Listed investments	<i>3</i>	2 147 593	2 628 557
Loan	<i>4</i>	60 000	60 000
Current assets			
Inventories		8	8
Accounts receivable and prepayments less provisions		1 951 384	916 758
Deposits		2 100	3 630
Cash and cash equivalents	<i>5</i>	2 870 770	766 317
Total assets		7 250 822	4 447 449
Equity and liabilities			
Funds and reserves			
Funds	<i>6</i>	2 524 126	1 926 296
Retained surplus		1 458 507	1 483 637
Current liabilities			
Accounts payable and provisions		3 268 189	1 037 516
Total equity and liabilities		7 250 822	4 447 449

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Statement of changes in equity

for the year ended 30 June 2003

	<i>Note</i>	Funds R	Retained surplus R	Total R
Balance at 1 July 2001		475 153	1 326 856	1 802 009
Net awards and expenses		(48 857)	–	(48 857)
Net surplus for the year		–	1 656 781	1 656 781
Transfers to funds		1 500 000	(1 500 000)	–
Balance at 30 June 2002		1 926 296	1 483 637	3 409 933
Net awards and expenses		(2 170)	–	(2 170)
Net surplus for the year		–	574 870	574 870
Transfers to funds		600 000	(600 000)	–
Balance at 30 June 2003		2 524 126	1 458 507	3 982 633



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Income and expenditure account *for the year ended 30 June 2003*

	<i>Note</i>	2003 R	2002 R
Income	7	2 840 900	2 729 641
Expenditure	8	2 266 030	1 072 860
Net surplus for the year		<u>574 870</u>	<u>1 656 781</u>

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Cash flow statement

for the year ended 30 June 2003

	2003 R	2002 R
Net surplus for the year	574 870	1 656 781
Adjustments for:		
– revaluation of investments	469 787	(151 288)
– depreciation	110 149	17 433
– (surplus)/loss on sale of investments	(4 425)	33 324
– interest and dividends received	(263 204)	(164 953)
Cash outflows from operations before working capital changes	887 177	1 391 297
Working capital changes	1 197 578	368 519
(Increase)/decrease in accounts receivable and prepayments	(1 034 626)	82 257
Decrease in deposits	1 530	–
Increase in accounts payable and provisions	2 230 673	286 262
Cash generated by operations	2 084 755	1 759 816
Interest and dividends received	263 204	164 953
Net cash inflow from operating activities	2 347 959	1 924 769
Cash flow from investing activities	(241 336)	(1 431 813)
Acquisition of furniture and equipment	(75 110)	–
Acquisition of computer equipment	(181 828)	(32 241)
Net disposal/(acquisition) of investments	15 602	(1 399 572)
	2 106 623	492 956
Cash flow from funds activities		
Net awards and expenses	(2 170)	(48 857)
Net increase in cash and cash equivalents	2 104 453	444 099
Cash and cash equivalents at beginning of year	766 317	322 218
Cash and cash equivalents at end of year	2 870 770	766 317



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Notes to the annual financial statements

for the year ended 30 June 2003

1. Accounting policies

The financial statements have been prepared in accordance with the historical cost convention and incorporate the following principal accounting bases and presentation which are the same as those adopted for the previous year.

1.1 Inventories

The inventories of publications are held and sold by the Institute for its own account and on behalf of its publishing partners who have underwritten some of the publications. The inventories are reflected in the financial statements at nominal value.

1.2 Listed investments

Listed investments, classified as 'available for sale financial assets', are initially carried at cost. Subsequent to initial recognition they are carried at their market value calculated by reference to stock exchange quoted selling prices at the close of business on the balance sheet date.

1.3 Fixed assets and depreciation

Furniture and equipment are depreciated over their estimated useful lives. Medals, plaques, dies, and banners are recorded at a nominal value.

1.4 Investment income

Dividends are recognised when the right to receive payment is established.

1.5 Cash and cash equivalents

For the purpose of the cash flow statement, cash and cash equivalents comprise cash on hand, deposits held on call with banks, and investments in money market instruments, net of bank overdrafts.

1.6 Retirement benefits

The Institute contributes to a defined contribution plan. Contributions to defined contribution funds are charged against income as incurred.

1.7 Provisions

Provisions are recognised when the Institute has a present legal or constructive obligation as a result of a past event, for which it is probable that an outflow of economic benefits will occur and a reliable estimate can be made of the amount of the obligation. Where the effect of discounting is material, provisions are discounted. The discount rate used is the pre-tax rate that reflects current market interest assessment of the time value of money, and, where appropriate, the risks specific to the liability.

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Notes to the annual financial statements for the year ended 30 June 2003 (continued)

		2003 R	2002 R
2. Furniture and equipment			
<i>Cost</i>			
Furniture and fittings		194 604	119 493
Computer equipment		403 524	221 697
		<u>598 128</u>	<u>341 190</u>
<i>Accumulated depreciation</i>			
Furniture and fittings		133 436	109 215
Computer equipment		245 725	159 796
		<u>379 161</u>	<u>269 011</u>
Net book value		<u>218 967</u>	<u>72 179</u>
	Furniture and fittings R	Computer equipment R	Total R
Opening net book value	10 278	61 901	72 179
Additions	75 110	181 827	256 937
Disposals	-	-	-
Depreciation	(24 221)	(85 928)	(110 149)
	<u>61 167</u>	<u>157 800</u>	<u>218 967</u>
		2003 R	2002 R
3. Listed investments			
Investments at cost at beginning of year		2 582 814	1 216 564
Net purchases/(sales) of investments		(20 494)	1 366 250
Investments at cost at end of year		<u>2 562 320</u>	<u>2 582 814</u>
Investments at market value		<u>2 147 593</u>	<u>2 628 557</u>
4. Loan			
The interest-free loan is to the Western Cape Branch, of the SAIMM. The financing is for a conference to be held in 2003, after which the loan will be repaid and a portion of the surplus distributed to SAIMM.			
5. Cash and cash equivalents			
Current account		123 377	20 189
Call account		2 743 893	745 538
Cash on hand		3 500	590
Total		<u>2 870 770</u>	<u>766 317</u>

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Notes to the annual financial statements for the year ended 30 June 2003 (continued)

	2003 R	2002 R
6. Funds		
6.1 Prof. R.E. Robinson Fund		
– balance at beginning of year	520 622	120 000
– transfer from retained surplus	–	400 000
	520 622	520 622
6.2 Brigadier Stokes Memorial Fund		
– balance at beginning of year	113 633	96 659
– awards and expenses	(17 598)	(33 026)
– transfer from retained surplus	–	50 000
	96 035	113 633
6.3 PWJ van Rensburg Fund		
– balance at beginning and end of year	1 149 778	153 778
– Funding—J. Crossland Education Maths and Science	–	(4 000)
– transfer from retained income	–	1 000 000
– awards and expenses	(2 500)	–
	1 147 278	1 149 778
6.4 MacArthur Forrest Memorial Fund		
– balance at beginning of year	86 920	65 889
– awards and expenses	(33 157)	(28 970)
– transfer from retained surplus	450 000	50 000
	503 763	86 919
6.5 Safety in Coal Mining Award Fund		
– balance at beginning of year	–	38 205
– awards and expenses	–	(38 205)
	–	–
6.6 SAIMM Scholarship Fund		
– balance at beginning of year	–	–
– awards and expenses	(12 381)	–
– transferred from retained income	150 000	–
	137 619	–
6.7 Gold Medal Awards—Pretoria & Wits Universities		
– balance at beginning of year	55 343	–
– donations received	140 000	130 000
– awards and expenses	(76 534)	(74 656)
	118 809	55 344
Total of funds at end of year	2 524 126	1 926 297

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Notes to the annual financial statements for the year ended 30 June 2003 (continued)

	2003	2002
	R	R
7. Income comprises		
Company affiliates subscriptions	275 936	252 632
Membership entrance fees and subscriptions	800 309	800 508
Conferences, colloquia and schools	1 344 868	1 508 337
Interest and dividends received	263 204	164 953
Revaluation of investments	–	151 288
Historical cost surplus on sale of investments	4 425	–
Net income from Special Publications	72 158	36 535
Special Publication series		
– Sales	90 827	62 078
Less expenditure		
– Expenses net of postage recoveries	(18 669)	(25 543)
	2 840 900	2 914 253

	2003	2002
	R	R
8. Expenditure comprises		
Secretarial costs	472 987	352 220
Institute Journal	426 431	353 567
– Expenses	1 002 127	851 310
– Secretarial fee	86 265	94 885
	1 088 392	946 195
Deduct	661 961	592 628
– Advertising	486 948	418 055
– Sales	175 013	174 573
Administration expenditure	674 684	431 832
Audit fee	20 000	14 850
Revaluation of investments	469 787	–
Depreciation	110 149	17 433
Historical cost loss on sale of investments	–	33 324
Subscriptions written off	91 992	54 246
	2 266 030	1 257 472

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Notes to the annual financial statements for the year ended 30 June 2003 (continued)

9. Financial instruments

The Institute's financial instruments consist of cash and cash equivalents, accounts payable and accounts receivable, and investments in money markets and listed investments.

The carrying amounts of the following financial instruments, net of provision for losses, approximate their fair values:

Credit risk

Accounts receivable

Accounts receivable is presented net of the provision for doubtful debts. There is a higher than normal risk with respect to accounts receivable due to the nature of the receivables and relative to long credit terms.

Cash and cash equivalents

The Institute's resources are placed with a high credit quality financial institution. Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis.

Liquidity risks

The Institute manages liquidity risk by proper management of working capital and cash flows. Facilities are available to fund any potential shortfall in cash resources.

Interest rate risk

The Institute does not have a significant exposure to interest rate risk.

10. Income tax

The Institute is exempt from income tax in terms of Section 10(1)(cB)(i)(ff) of the Income Tax Act.

11. Donations tax

The Institute is exempt from donations tax in terms of Section 56(1)(h) of the Income Tax Act.

Environmental Solutions Alliance (ESA)

Launch of South Africa's first environmental alliance in the mining sector*

The MEC for Agriculture, Conservation, Environment and Land Affairs in Gauteng, Ms Mary Metcalfe, launched the first-ever environmental alliance servicing the South African mining sector on 14 August 2003.

The Environmental Solutions Alliance (ESA) combines the knowledge, skills and financial muscle of five significant players in the environmental industry, representing the fields of environmental technology, environmental consulting, environmental law, and environmental finance. The companies are Mintek, Bohlweki Environmental, IMBEWU Enviro-Legal Specialists, Old Mutual, through its Green Horizons Environmental Rehabilitation Company, and Old Mutual Specialised Finance (Omsfin).

According to Mr Rufus Maruma, chairperson of Bohlweki Environmental, ESA offers a unique combination of expertise essential for the successful planning, operation and rehabilitation of modern mining and metallurgical operations.

Mr Maruma indicated that the past few decades have seen a significant increase in the environmental awareness of national governments, industry and the public in general. A number of high profile pollution incidents and growing scientific concern over issues such as ozone depletion and climate change, have resulted in the negotiation of international treaties such as the United Nations Framework Convention on Climate Change, the Vienna Convention on Ozone Depletion, and the Basel Convention regulating the transboundary movement of hazardous waste. In addition, South Africa has a rapidly changing environmental legal regime that introduces increasingly stringent standards, making it essential for industry to operate with an environmental conscience.

International meetings like last year's World Summit on Sustainable Development and the impending World Parks Congress, on international protected areas, also serve to firmly place environmental issues on national and local agendas, and provide public platforms for environmental pressure groups to highlight their concerns.

As a result of these pressures, the beginning of the new millennium has coincided with an ever-increasing demand for responsible corporate governance. This includes 'triple-bottom-line' accounting, whereby social, environmental and financial results, impacts and implications are all considered when assessing the desirability of a project or the performance of a company. Industries across the board are being forced to re-think the manner in which they operate—particularly in terms of the place that industry and development occupy in society. The mining industry is no exception to these changes in the business, legal and social environment. Due to the pivotal role played by mining in the development of South Africa, our local mining industry must conduct itself in a manner that reflects the increased attention of government and civil society to environmental and social issues. An example of this is the Mineral and Petroleum Resources Development Act (No. 28 of 2002), which will soon come into operation. Some of the more significant implications of this act will be:

- ▶ To require mining companies to produce detailed environmental, social and labour management plans and to demonstrate compliance with socio-economic obligations in terms of the new Mining Charter, as preconditions to the acquisition and conversion of mining rights
- ▶ To subject mining to the full force of the requirements

for Environmental Impact Assessment, in line with the standards applies to all other industries

- ▶ To expose the directors of mining companies to potential personal liability for environmental degradation caused by mining operations over which they had authority
- ▶ To require mining companies to provide for the full cost of mine closure and the mitigation of environmental degradation caused by mining. This financial provision must be demonstrated before mining operations have begun.

The mining industry must therefore have access to new technical, environmental, social, and financial solutions to the challenges that lie ahead.

It is precisely to provide these solutions that ESA has been created. The five members of the alliance are:

- ▶ *Bohlweki Environmental*—specialist environmental consultants providing top-of-the-range services in environmental management, engineering, risk assessment, training and development
- ▶ *IMBEWU Enviro-Legal Specialists*—environmental legal specialist consultants with an intimate knowledge of the mining industry and a detailed understanding of the practical implications and the application of the evolving environmental and mining legal regimes
- ▶ *MINTEK*—specialists in mineral and metallurgical processing technology, with groundbreaking process control and optimization, waste reduction and neutralization technologies
- ▶ *Old Mutual*—through the Green Horizons Environmental Rehabilitation Company, which offers a variety of funding options for environmental rehabilitation. This will allow mining companies to maximize tax benefits for funds invested for environmental rehabilitation purposes
- ▶ *Old Mutual Specialised Finance (Omsfin)*—financial specialists in interest rate management, credit, debt origination, debt advisory services and specialized finance.

Clients will be able to access the full range of services offered individually or collectively by the members of ESA through a single point of entry. This holds important benefits for clients due to:

- ▶ the easy access offered via ESA to the expertise of acknowledged experts in four key environmental disciplines, namely consulting, law, technology and finance
- ▶ the synergies generated by companies that have, thanks to their long experience of working together, developed an intimate knowledge of the professional contributions that each can make to a projects and
- ▶ the cost-effectiveness of accessing a full range of services from a single service provider.

In addition to servicing the southern African market, ESA will also be in a position to offer comprehensive advice and professional assistance to prospective international investors, who may not be familiar with local players and national and regional contexts.

In short, ESA offers integrated and holistic solutions to the environmental, social, financial and legislative challenges facing the mining industry and other industrial sectors in southern Africa. ♦

All change in aluminium industry—as Alcan launch hostile bid for Pechiney, new market report analyses supply and demand worldwide*

A new report from market analyst Roskill says that the aluminium industry is planning 10 Mtpa of new primary capacity over the next 5 to 7 years. The *Economics of Aluminium* (8th edition) is published in the month when Alcan has launched a hostile bid for Pechiney that would, if successful, create the world's largest producer in terms of revenue.

In terms of production, Alcoa is by far the largest aluminium producer, with about 13% of world output in 2002, followed by the Russian company RusAl with 9.5%, Alcan with 8.6%, and Pechiney with about 5%.

The report says that reductions in costs, brought about by economies of scale and more efficient use of energy, are enabling aluminium producers to remain viable at lower price levels. At the same time, high-energy costs have forced older and smaller smelters, largely in the USA, to cut back or close. The increasing efficiency of the aluminium production industry is borne out by the fact that in 2003 prices are at their lowest level in constant dollar terms, yet some 10 Mtpa of new primary capacity is planned over the next 5 to 7 years.

Quality problems in expanding Chinese industry

The report says that between 2000 and 2002, supply of primary aluminium grew at a 3.3% year on year average, compared with 2.2% for consumption. Much of the increase in input was in China, where year on year production increased by an average of 14.2% between 1993 and 2002. It is now the world's largest producer with, 16% of global output. The expansion of the Chinese industry was encouraged by the government to meet rising demand, which resulted in significant deficits in 1999 and 2000. However, Roskill says that, despite rising production, dependence on imported alumina continues to grow and the deficit is expected to reach 5 Mt by 2005. The Chinese alumina industry is handicapped by a lack of suitable bauxite resources, resulting in high energy consumption and poor quality alumina

High power tariffs make high production costs another problem for the Chinese aluminium industry. Although they have declined, costs in 2002 were the equivalent of \$34/MWh, considerably higher than in other countries where costs range from \$10 to \$30/MWh. Roskill says that reliability of power has improved and reported tariffs tend to be exaggerated to show higher profits for subordinate power plants, which enjoy tax concessions.

Efficiency boost from new technology

Worldwide, operational efficiency in the aluminium industry

is being improved by increasing the amperage of potlines, while simultaneously reducing the operating voltage of each cell. Improved cathode and anode construction, and conversion from older Söderberg anode technology to prebaked anodes, are also reducing costs and emissions

Consolidations and new projects

Consolidation of the Russian aluminium industry in 2001 produced two major groups, RusAl and Sual, operating the world's largest capacity smelters. In 2002, Norsk Hydro acquired the German company VAW, and Hydro Aluminium became the fifth largest producer of primary aluminium in the world.

According to the report, thirty-four primary aluminium-smelting projects with a total capacity of about 7.6 Mtpa were under consideration outside China in 2003. Twelve are greenfield projects and the remainder are expansions to existing smelters. New Chinese projects add a further 3.8 Mtpa.

Strong demand forecast in transport sector

The report says that world demand for aluminium is expected to grow by an average of 2.9% p.a. giving a total market of 42.2 Mt by 2008. Roskill forecasts that the transport sector will perform best, with a growth rate of 5.2% p.a. With the growth of consumerism in the highly populated countries of Asia, consumer durables are expected to show a growth rate of 3.5% p.a. On a regional basis, Roskill forecasts the Asian market to grow at 4.3% p.a., while growth in the more mature North American and Western European markets will be closer to 2% p.a.

Cars to double aluminium consumption

The unit consumption of aluminium per passenger vehicle is expected to double over the next ten years to about 200 kg. The ease with which aluminium can be recycled is a major factor in its use in motor vehicles, as legislation requiring vehicles to be almost totally recycled has been introduced in Europe. High-speed vehicle ferries are providing one of the largest non-motor vehicle markets in the transport sector.

The Economics of Aluminium (8th edition 2003) is available at £1500/US\$3000/€2625 from Roskill Information Services Ltd, 27a Leopold Road, London SW19 7BB, England.

Tel: +44 20 8944 0066,

Fax: +44 20 8947 9568,

E-mail: info@roskill.co.uk. ◆

Vanadium market regains ground as capacity is reduced— New market report analyses vanadium supply and demand worldwide*

A new report from market analyst Roskill says that the vanadium market finally shows signs of improving in the first quarter of 2003, after a period of chronic oversupply and uneconomic prices. *The Economics of Vanadium* (10th edition, 2003) says that Xstrata's decision to close the Windimurra plant in Australia, and production problems in Russia, reduced the supply overhang, and pentoxide prices rose accordingly.

The report says that the short history of this plant highlights the difficulties faced by vanadium producers over the past few years. The 1997 bankable study for the proposed plant came after a period of steady growth in demand and was based on a projected vanadium pentoxide price of \$3.50/lb. When the plant came onstream in January 2002, the market price had fallen to \$1.40/lb, and remained under \$1.50/lb for most of the following two and a half years. This reflected not only a downturn in vanadium demand, but also the burgeoning supply of vanadium on the market, particularly that recovered from secondary sources.

While world production rose by almost 10 000 t between 1994 and 2002, demand over the same period showed only limited growth. Looking ahead, Roskill expects the long-term future annual growth rate for vanadium demand to be in the region of 3%. With the reduction in capacity, the market is regaining some lost ground and prices have recovered somewhat. However, Roskill says that the price will remain subdued in the medium term, particularly if supplies increase in the absence of new markets and major new applications.

Xstrata at centre of primary production

The report shows that primary production of vanadium is centred on the activities of the Xstrata group. In South Africa, the company produced a total of 7 700 t contained vanadium in 2002, plus a further 3 100 t from its Windimurra operation. Most vanadium is produced as a vanadium-bearing slag, a co-product of steel produced by

smelting vanadiferous iron ores. Highveld Steel and Vanadium of South Africa is the largest producer of vanadium in slags, accounting for almost 9 600 t contained vanadium in 2002. In the same year, Russia accounted for almost 5 900 t contained vanadium and China for 16 000 t, although according to the report, some estimates suggest that Chinese vanadium production could be higher if all the potential vanadium were recovered from slags.

Secondary production gains importance

Roskill says that an increasingly important source of vanadium is secondary materials, including spent catalysts, ashes and residues. The vanadium largely originates from heavy crude oils, such as those from Venezuela. These secondary sources account for at least 4 000 tpa V₂O₅.

Demand for vanadium has largely stagnated since the mid-1990s. After a peak of over 37 000 tV in 1998, consumption fell to around 34,700tV in 2002. Over 85% of all vanadium is consumed in the manufacture of special steels, therefore demand is largely determined by the underlying trends in the steel industry—which in turn are affected by the prevailing global economy

Strong potential in VRB market

There are potential medical uses for vanadium in the treatment of diabetes and as a contraceptive, but the most significant potential new use is the vanadium redox battery (VRB). The VRB is said to have many advantages for energy storage and could provide a market for up to 10 000 tpa V₂O₅. However, it is unlikely that this market will be realized in the immediate future.

The Economics of Vanadium (10th edition 2003) is available at £1400/US\$2800/€2450 from Roskill Information Services Ltd, 27a Leopold Road, London SW19 7BB, England. Tel: +44 20 8944 0066, Fax: +44 20 8947 9568, E-mail: info@roskill.co.uk. ◆