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Annual Report 2003



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Nordkalk is...

the leading manufacturer of limestone-based products in northern Europe.

Nordkalk makes crushed and ground limestone, enriched calcite together with both quick and slaked lime. Its product range also includes dolomite and the rare mineral wollastonite. The raw materials are extracted from Nordkalk's own deposits, of which there are eight in Finland, six in Sweden, three in Estonia and three in Poland. Nordkalk also has a holding in a mining company in Norway.

It cleans, neutralises, fills, stabilises

Limestone-based products are used in industry, agriculture and environmental care. The spreading of ground lime on fields to reduce the natural acidity of the soil is familiar to most of us. Lime is needed for the same reason in environmental care - to neutralise the acidity of watercourses and forests. Limestone products can be used to clean the flue gases from coal-fired power plants and so reduce air pollution. They are also used to regulate the acidity of our drinking water and to clean our wastewater.

Nordkalk's largest market is nonetheless industry, to which Nordkalk supplies four fifths of its annual output. Limestone products are used at some stage in the manufacture of many of the things that we use in our everyday lives. The paper industry, which is Nordkalk's largest customer group, uses GCC ground from limestone and PCC made from quick lime as coating pigments and fillers. The steel industry needs lime to remove impurities at various stages of the manufacturing process and in sugar refining, too, lime is used for purification. In the building materials industry limestone products are used as a raw material in cement, concrete, bricks, plasters and levelling compounds, for example. They are also used in the manufacture of glass and paints. Dolomite is an important raw material for the fertiliser industry, and wollastonite is needed to make plastics and ceramics, etc.

Lime is used to stabilise the soil in ground and road engineering. Deep stabilisation is a method of strengthening the foundations for roads and railways, for example. It also prevents subsidence and improves bearing qualities. In surface stabilisation soil characteristics can be



improved with the aid of lime in road building. Finally, the asphalt used for surfacing roads also contains limestone powder.

Many factors of success

Nordkalk's success is built on a number of pillars. As a consequence of the diverse uses to which limestone products can be put, Nordkalk has a broad spectrum of customers that includes many branches of industry, local government authorities and farmers. This protects Nordkalk from the economic effects of cyclical fluctuations.

Limestone varies considerably in its properties, both chemical and physical. Nordkalk's deposits represent different geological periods and types. This enables Nordkalk to offer its customers all the qualities of products that they require. Extraction methods vary according to the kind of stone and the use to which it will eventually be put. The supply of raw materials is guaranteed because Nordkalk owns all its extraction rights.

The limestone is processed according to the demands of the customer. To produce the best possible end-product means that it has to be adapted precisely to the process for which it is to be used. This poses a challenge to the personnel, who have to be familiar with all phases of the customer's manufacturing processes. Investment in research and development as well as production technology ensures that Nordkalk is able to respond to ever-changing demands.

Nordkalk's deposits and production plants are concentrated around the Baltic Sea. From the logistics point of view it is an advantage that the heavy stone material can be transported by sea. We supply stone from Sweden to Poland, from Estonia to Germany and from Norway to Finland in order to provide the customer with the right type of stone.

More than 1300 Nordkalk employees serve customers at 36 different locations in eight countries. The values determining Nordkalk's operations are trust, competence and quality. Nordkalk is a partner that can be trusted. The company's competent personnel offer high-quality service and limestone products of the right kind supplied at the right time.

Continuing stable development

The year 2003 went according to expectations. Nordkalk's sales rose and cash flow remained strong. Sales grew to 259.8 million, which is three per cent more than the previous year. Its operating profit, 35.3 million, was at the same level as the year before. Profit after financial items improved by 21 per cent and amounted to 24.2 million.

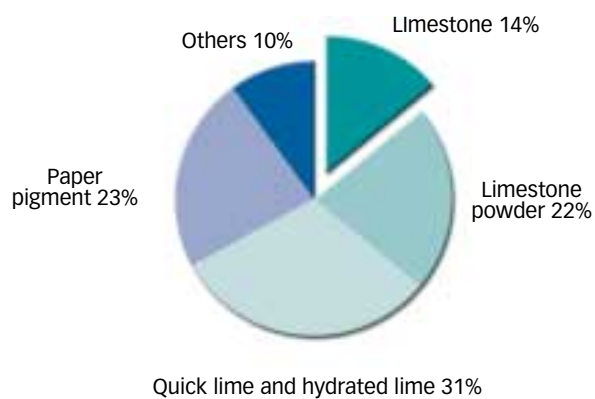
Nordkalk's ownership changed on 12 February 2003 when the deal between NK-Holding Oy Ab and Partek Corporation was finally concluded. NK-Holding is owned

by a Finnish group of investors that includes Ahlström Capital Oy, investment funds managed by CapMan and a group of mainly institutional investors.

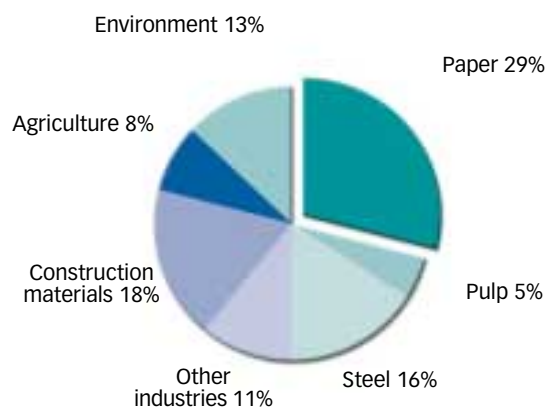
Nordkalk was absorbed into NK-Holding on 29 February 2004. At the same time NK-Holding changed its name to Nordkalk Corporation. The president of the company is Christer Sundström. The merger will not cause any changes in the company's operations or the personnel's situation.

With the new owner Nordkalk's independent image has been strengthened and its corporate strategy defined more closely. Nordkalk is the market leader in the Baltic region and is third largest by sales on the European market for limestone and limestone products. Nordkalk will continue to reinforce this position by controlled growth and maintained profitability.

Sales by product group



Sales by customer group





Stable Prospects for the Future

The year 2003 brought with it major changes in the ownership structure of Nordkalk. After having been a wholly-owned subsidiary of the Partek group, Nordkalk was sold to NK-Holding, a consortium owned by Ahlström Capital, funds managed by CapMan and a group of predominantly institutional investors. The deal was concluded on 12 February 2003.

A comprehensive overhaul of the company's strategy was carried out during the spring of 2003 and this resulted in operations being defined more precisely. The most obvious change was a clear division between the different local operations and those that are of a cross-frontier nature. Nordkalk's basic strategy - geographical expansion in northern Europe while preserving profitability - remains unchanged, however.

Sales rose by three per cent while operating profit was at the same level as the preceding year. Operations in Poland continued to develop favourably and profit there came up to expectations. The adaptation of the Polish operations has been accomplished. Sales to industry in both Finland and Sweden were somewhat better than in 2002.

Sales to agriculture, however, were disappointing. The debate concerning subsidies to agriculture led to uncertainty among farmers in Finland and Sweden about what they should invest in. Agriculture in general is characterised by an overall feeling of caution in Finland and Sweden. Another disappointment was the latest expansion in capacity of Nordkalk's subsidiary Suomen Karbonaatti Oy in Finland. This did not come on stream as expected and led to disturbances in production.

Among Nordkalk's investment projects during the year mention may be made of the environmental investment at Köping in Sweden where the system for filtering

emissions from the lime kiln was renewed completely. Investment in process improvements is also under way and, when complete, will increase the kiln's capacity by 20 per cent.

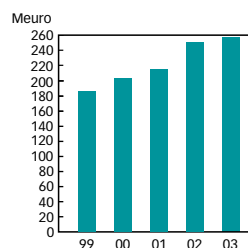
Nordkalk has today an age structure that inspires us to activate our older workers. We have a comprehensive training and activation programme (55+) designed partly to prolong their active time at work and partly to ensure that their important skills are not lost to Nordkalk.

Nordkalk's operations are stable even in a situation where some of our customers have been confronted with difficulties. This stability is because we have a wide range of customers spread over a relatively large geographical region.

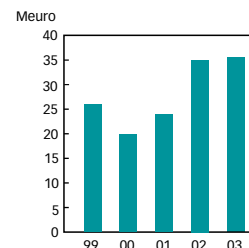
We shall continue to strengthen our position in Poland, where we already last year could discern a marked improvement in several segments. Both in Poland and throughout the whole of Nordkalk sales to the construction industry are on the increase. This also applies to road building and soil stabilisation. Thanks to our widening range of products our sales to the paper industry are also growing. Sales to agriculture are a question mark but we hope that the public debate will revive farmers' confidence in the future. Sales of environmental products are rising all the time and Poland's membership of the European Union promises a wider market, especially for the cleaning of flue gases from coal-fired power plants.

The stable development of past years constitutes a good basis for further growth in 2004.

Christer Sundström
President



Net sales



Operating profit

Annual Report of the Board of Directors

Continuing stable development

Nordkalk's sales increased slightly compared to the previous year. Most of the increase comes from the industrial segment, where sales of products for soil stabilisation and road construction increased strongly. Deliveries to the paper industry grew somewhat, while sales to the steel and building material industries were at the same level as in the year before.

Total sales to the agricultural sector decreased compared to 2002. In Finland and Sweden the official dispute about farming subsidies granted by the EU has raised uncertainty among farmers. Combined with unfavourable liming conditions at the end of the year, this led to decreased sales of soil improving lime.

Sales of environmental products for flue gas cleaning and water treatment remained unchanged in 2003.

In Poland sales continued to increase during the past year. Export of dolomite from Estonia increased compared to 2002.

Consolidated net sales and operating profit

Consolidated net sales increased to EUR 259.8 (252.0) million, which is an increase of 3 per cent.

Consolidated operating profit was at the year-ago level and was EUR 35.3 (35.2) million, which is 13.6 (14.0) per cent of net sales.

Depreciation according to plan amounted to EUR 22.1 (22.2) million.

Financial expenses decreased EUR 4.0 million compared to year 2002 and were EUR 11.2 million. Financial items include an entry of EUR 1.9 million that is the additional return on the capital loan which Nordkalk issued in 1999. In 2002 the amount was EUR 6.9 million. Profit after financial items was EUR 24.2 (20.0) million, representing 9.3 (7.9) per cent of net sales.

Cash flow remained strong.

Return on capital employed was 15.4 (15.3) percent.

Total assets were EUR 300.0 (Dec. 31, 2002:300.7) million. The equity to total assets ratio was 36.2 (37.9) per cent excluding the outstanding convertible capital loan.

When NK-Holding Oy Ab bought Nordkalk Corporation, a right

arose for the holders of the Nordkalk 1999 Going Public Bond to request redemption of the bonds. The amount of EUR 44.0 million has been redeemed of the original total of EUR 100 million.

Investments

Total investment during the period amounted to EUR 21.7 (29.4) million.

Nordkalk's subsidiary Suomen Karbonaatti Oy accomplished the expansion of capacity for processing paper pigment products in Lappeenranta, Finland. The investment, which was started in 2002, was put into operation in the beginning of May. It strengthens further the company's position as Finland's largest producer of coating pigments for paper and cardboard. The total amount of the investment is EUR 16.5 million, of which EUR 10.5 million is entered in year 2003.

In Köping, Sweden, the installation of a new filter for the lime kiln's flue gas cleaning was finished. The value of the investment increases to EUR 3.1 million, of which EUR 2.6 million is entered in 2003.

During the past year Nordkalk bought out the personnel's share in Nordkalk Miedzianka S.A. in Poland. Nordkalk's share of ownership is now 96 per cent.

New owners

On 12 February 2003 NK-Holding Oy Ab finalized the purchase of the entire share capital of Nordkalk Corporation. The seller was Partek Corporation. NK-Holding is owned by a Finnish investor group, which comprises Ahlström Capital Oy (26.2 %), the funds managed by CapMan (26.2 %) and a group of mainly institutional investors.

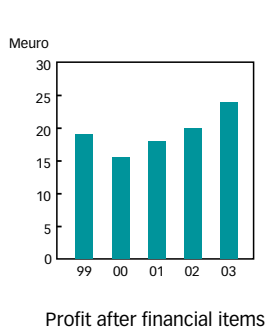
Merger of NK-Holding and Nordkalk

The boards of directors of NK-Holding Oy Ab and Nordkalk Corporation have approved a merger plan for a merger of subsidiaries between the companies. The purpose of the merger is to simplify the group structure and decrease costs. The company will be called Nordkalk Corporation and the president is Christer Sundström. The merger does not affect Nordkalk's operations or the position of the personnel. The merger is expected to be accomplished during the first quarter of 2004.

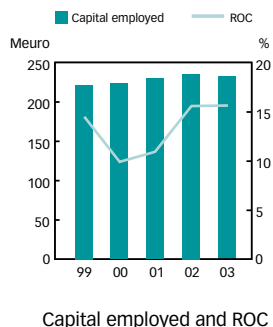
Shares

Until the merger is accomplished, NK-Holding Oy Ab owns 100 per cent of Nordkalk Corporation's shares. After the merger the ownership basis of Nordkalk will be the same as the current one of NK-Holding.

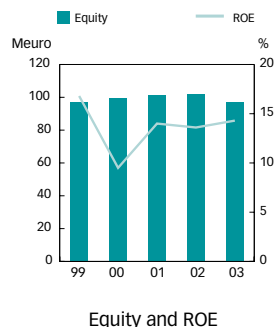




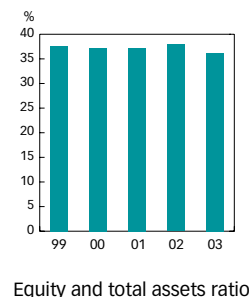
Profit after financial items



Capital employed and ROC



Equity and ROE



Equity and total assets ratio

Personnel

The total number of employees in Nordkalk Group was 1,310 (1,311) at the end of the year.

During 2003 the programme called 55+ continued. The programme aims to improve the older employees' ability to keep working until retirement. Another goal is to keep the professional knowledge in the company and to transfer it to the younger employees. Occupational health and safety have been other important development issues during 2003. The managers have been offered training in personnel development and in managing skills.

This Annual Report includes also a Personnel Report.

Research and Development

Total R&D expenditure was EUR 4.5 (4.5) million, which represents 1.7 (1.8) per cent of net sales.

During the past year the R&D activities strongly focused on products for paper industry. In addition, Nordkalk is a part-owner in CTC (Coating Technology Center) in Raisio, Finland, where a new calander was build during the year. This makes it possible to develop the surface qualities of the paper.

Within the environmental segment, the R&D work mainly consisted of the development of Filtra, a water purification concept, with a special focus on the waste water from rural areas. In co-operation with VTT, the Technical Research Centre of Finland, Nordkalk has worked on flue gas cleaning products in order to minimize carbon dioxide emissions.

In the agricultural sector, the development has concentrated on new spreading technology of soil improvement lime. A new spreader has been built and it will be introduced in early 2004.

In the field of geology, the main focus continues to be on the prospecting of new stone reserves.

Environment and quality

All production plants in Finland and all operations in Sweden have been certified according to the ISO 14001 environmental standard. In Poland and Estonia environmental audits are organized at regular basis. In Köping, Sweden, the installation of a new electric filter for the lime kiln was accomplished during 2003. At all the locations, Nordkalk continues the efforts to minimise the environmental impact of the operations in the form of noise, vibration and dust.

In order to secure the continued development of the operations, a total amount of EUR 2.7 million was invested in environment-related projects.

This Annual Report includes also an Environmental Report.

All operations in Sweden have been certified according to the ISO 9001:2000 quality standard, as well as parts of the production in Finland. Training in the quality and environmental management systems is continuously offered at all locations.

Board of Directors, President and Auditors

Members of the Board of Directors :

1 Jan.-12 Feb. 2003

Kari Heinistö	chairman
Carl-Gustaf Bergström	member
Patrick Enckell	member
Christer Sundström	member and President of Nordkalk Corporation

12 Feb. 2003 -

Björn Mattsson	chairman
Morten Ahlström	member
Jan Inbarr	member
Jukka Järvelä	member
Orvo Siimestö	member
Christoffer Taxell	member

The president is Christer Sundström.

Auditors were Sixten Nyman, APA, and Solveig Törnroos-Huhtamäki, APA, and the deputy auditor has been KPMG Wideri Oy Ab, Authorised Public Accountants.

Board's proposal for the distribution of profits

Profit available for distribution for the Nordkalk parent company is EUR 47.1 million and EUR 19.5 million for the Nordkalk Group. The Board proposes, according to the decision of the Extraordinary General Meeting on 28 December 2003, that a total of EUR 13,792,000.74 be used for dividends, which has been taken into account as advanced dividend. The dividend will be paid to the parent company NK-Holding Oy Ab.

Prospects for year 2004

Nordkalk's sales are expected to increase during 2004.

Helsinki, 28 January 2003

Björn Mattsson
Morten Ahlström
Jan Inbarr
Jukka Järvelä
Orvo Siimestö
Christoffer Taxell

Christer Sundström, President

Consolidated Income Statement / Nordkalk
Jan. 1 - Dec. 31, 2003

	Note	2003 1000 euro	%	2002 1000 euro	%
Net sales	1	259 794	100.0	252 034	100.0
Cost of goods sold		202 291		194 209	
Gross profit		57 503	22.1	57 825	22.9
Selling , marketing and development expenses		11 992		12 492	
Administration expenses		15 668		16 261	
Other operating income		6 337		7 637	
Other operating expenses		847		1 468	
		22 170	8.5	22 584	9.0
Operating profit	2,3,4	35 333	13.6	35 241	14.0
Share of results of associated companies	5	15		2	
Financial income and expenses	6,7	-11 179		-15 220	
Profit before extraordinary items		24 169	9.3	20 023	7.9
Extraordinary items	8	0	0.0	-3 600	-1.4
Group contribution					
Profit before taxes and minority interest		24 169	9.3	16 423	6.5
Direct taxes	9	-8 280		-4 715	
Minority interests		-2 945		-3 630	
Net profit for the period		12 944	5.0	8 079	3.2

Consolidated Balance Sheet / Nordkalk
Dec. 31, 2003

	Note	Dec. 31, 2003 1000 euro	%	Dec. 31, 2002 1000 euro	%
Assets					
Fixed assets and long-term investments					
	10				
Intangible assets					
- Goodwill		1 440		1 740	
- Other intangible assets		6 086		6 125	
Tangible assets					
- Mineral deposits and land		48 601		53 321	
- Buildings and constructions		36 889		37 803	
- Machinery and equipment		113 605		110 636	
- Other tangible assets		2 943		2 990	
- Advance payments and construction in progress		6 892		9 798	
Investments	11				
- Shares in associated companies		657		642	
- Other shares and participations		2 054		2 059	
- Long term receivables		5		82	
Total fixed assets and long-term investments		219 172	73.0	225 197	74.9
Current assets					
Inventories	12	33 152		29 267	
Deferred tax asset		2 170		3 454	
Short-term receivables	12	32 932		31 723	
Cash and bank balances		12 611		11 055	
Total current assets		80 864	27.0	75 498	25.1
Total assets		300 036	100.0	300 695	100.0
Shareholders' equity and liabilities					
Shareholders' equity					
	13				
Share capital		65 676		65 676	
Share premium account		16		16	
Other restricted equity		746		508	
Net profit for previous years		17 936		27 719	
Net profit for the period		12 944		8 079	
Capital loan		56 020		100 000	
Total shareholders' equity		153 338	51.1	201 997	67.2
Minority interest		11 208	3.7	11 738	3.9
Provisions	14	7 245	2.4	8 898	3.0
Liabilities					
Deferred tax liability	9,15	17 213		16 368	
Long-term liabilities	15	58 100		16 052	
Short-term liabilities	16	52 932		45 643	
Total liabilities		128 245	42.7	78 062	26.0
Total shareholders' equity and liabilities		300 036	100.0	300 695	100.0

Financial Analysis Group

	Group	
	2003 1000 euro	2002 1000 euro
Operating activities		
Operating profit	35 333	35 241
Depreciation	21 976	22 051
Profit/loss on sale of fixed assets	-40	-24
Cash flow before changes in working capital	57 269	57 268
Change in working capital		
Inventories (- = increase)	-3 885	772
Short-term receivables (+ = decrease)	152	-3 357
Non interest-bearing liabilities (- = decrease)	-3 666	8 990
	-7 399	6 404
Financing, taxes and extraordinary items		
Financial income and expenses	-11 179	-15 220
Taxes	-8 280	-4 715
Extraordinary income and expenses	0	0
	-19 459	-19 935
Net funds from operating activities	30 411	43 737
Cash flow from investments		
Gross capital expenditure	-21 722	-29 423
Sale of fixed assets	423	345
	-21 300	-29 078
Net fund before financing	9 111	14 660
Financing		
Capital loan	-43 980	
Change in interest-bearing liabilities (+ = increase)	42 004	1 245
Dividends paid	0	-3 284
Contribution paid	-3 600	-13 538
Translation differences and other changes	-1 980	503
	-7 556	-15 074
Change in liquid funds	1 555	-414
Liquid funds January 1	11 056	11 469
Liquid funds December 31	12 611	11 056

Income Statement / Parent Company
Jan.1 - Dec. 31, 2003

	Note	2003 1000 euro	%	2002 1000 euro	%
Net sales	1	124 590	100.0	126 109	100.0
Cost of goods sold		91 723		92 101	
Gross profit		32 867	26.4	34 008	27.0
Selling, marketing and development expenses		4 237		4 516	
Administration expenses		10 726		10 819	
Other operating income		3 830		4 083	
Other operating expenses		181		358	
		11 314	9.1	11 610	9.2
Operating profit	2,3,4	21 553	17.3	22 398	17.8
Financial income and expenses	6,7	-2 345		-10 168	
Profit before extraordinary items		19 208	15.4	12 230	9.7
Extraordinary items	8	0	0.0	-3 600	-2.9
Group contribution					
Profit before appropriations and taxes		19 208	15.4	8 630	6.8
Depreciation in excess of plan		2 307		2 884	
Direct taxes	9	-5 776		-5 445	
Net profit for the period		15 739	12.6	6 069	4.8



Balance Sheet / Parent Company
Dec. 31, 2003

	Note	Dec. 31, 2003 1000 euro	%	Dec. 31, 2002 1000 euro	%
Assets					
Fixed assets and long-term investments					
Intangible assets		4 764		5 047	
Tangible assets					
- Mineral deposits and land		5 004		5 202	
- Buildings and constructions		13 861		15 303	
- Machinery and equipment		41 108		43 821	
- Other tangible assets		1 427		1 330	
- Advance payments & construction in progress		1 291		824	
Investments	11				
- Shares in subsidiaries		86 503		84 572	
- Long-term receivables from subsidiaries		47 524		50 276	
- Shares in associated companies		467		467	
- Other shares and participations		2 044		2 044	
- Long-term receivables from associated companies		5		17	
Total fixed assets and long-term investments		204 000	82.1	208 903	84.8
Current assets					
Inventories	12	18 890		16 007	
Short term receivables	12	17 911		18 040	
Cash and bank balances		7 655		3 393	
Total current assets		44 456	17.9	37 440	15.2
Total assets		248 456	100.0	246 343	100.0
Shareholders' equity and liabilities					
Shareholders' equity					
Share capital	13	65 676		65 676	
Share premium account		16		16	
Net profit for previous years		17 570		25 293	
Net profit for the period		15 739		6 069	
Capital loan		56 020		100 000	
Total shareholders' equity		155 021	62.4	197 054	80.0
Accumulated excess depreciation		16 476	6.6	18 783	7.6
Provisions	14	5 533	2.2	7 120	2.9
Liabilities					
Long-term liabilities	15	40 162		547	
Short-term liabilities	16	31 264		22 839	
Total liabilities		71 426	28.7	23 386	9.5
Total shareholders' equity and liabilities		248 456	100.0	246 343	100.0

Financial Analysis / Parent Company

	Parent company	
	2003 1000 euro	2002 1000 euro
Operating activities		
Operating profit	21 553	22 398
Depreciation	8 568	8 623
Profit/loss on sale of fixed assets	-38	-15
Cash flow before changes in working capital	30 084	31 006
Change in working capital		
Inventories (- = increase)	-2 882	1 582
Short-term receivables (+ = decrease)	0	5 428
Non interest-bearing liabilities (- = decrease)	-7 032	-116
	-9 914	6 894
Financial items, taxes and extraordinary items		
Financial income and expenses	-3 411	-11 206
Taxes	-5 776	-5 445
Extraordinary income and expenses	0	-3 600
	-9 187	-20 250
Net funds from operating activities	10 983	17 650
Cash flow from investments		
Gross capital expenditure	-6 668	-8 357
Sale of fixed assets	275	186
	-6 393	-8 171
Net fund before financing	4 590	9 479
Financing		
Capital loan	-43 980	
Change in interest-bearing liabilities (+ = increase)	39 694	661
Change in long-term receivables (+ = decrease)	3 958	-11 120
Dividends paid		-3 284
	-328	-13 743
Change in liquid funds	4 262	-4 264
Liquid funds January 1	3 393	7 657
Liquid funds December 31	7 655	3 393

Accounting Principles

The consolidated financial statements of Nordkalk Corporation are prepared in accordance with current regulations in Finland. The year reviewed covers the months January-December and the financial statements are presented in euros. When preparing financial statements in conformity with applicable regulations and generally accepted accounting principles, the company's management makes estimates and assumptions that affect the valuation and allocation of the reported figures. Actual results may deviate from such estimates.

Consolidation principles

The consolidated financial statements cover the parent company Nordkalk Corporation, and all companies in which the parent company, directly or indirectly, holds more than fifty percent of the voting rights at the end of the financial year. Companies acquired during the financial year have been included in the consolidated income statement from the date of acquisition and divested companies to the date of disposal. All intercompany transactions are eliminated as part of consolidation process. Acquisitions of companies are accounted using the purchase method of accounting. The difference between the acquisition cost of the shares of a subsidiary and the equity at the time of acquisition is allocated to fixed assets to the extent that their current value exceeds the book value. In this calculation untaxed reserves net of tax, is included in the equity. The excess value allocated to fixed assets is depreciated according to the depreciation plan of the fixed asset item in question. The remaining difference is carried as goodwill on consolidation, which is amortised over its expected useful life, 10 years. That portion of surplus value assigned to a deposit is written off linearly over a period of 30 years. Deferred tax liability on allocated acquired surplus value has partly been taken into account in the consolidated balance sheet.

Associated companies are consolidated in accordance with the equity method. The group's share of the earnings of associated companies, less amortisation of the goodwill recorded on acquisition, is presented in the consolidated income statement. Dividends received from associated companies are eliminated. In the consolidated balance sheet, the investment in associated companies and the group's equity are adjusted with the group's share in associated companies' increased net worth after their acquisition and goodwill less accumulated amortisation of goodwill. In 2003, hedging of own capital in SEK and PLN was introduced.

Minority interests in earnings and shareholders' equity are presented separately in the income statement and balance sheet.

Transactions in foreign currencies

Foreign currency transactions are recorded at the exchange rates prevailing at the time of transaction. At the end of accounting period receivables and liabilities are translated at the rates prevailing on the balance sheet

date. Exchange rate differences related to sales and purchases are treated as adjustments to the underlying items. Exchange rate gains and losses associated with financing are entered as net amount under financial income and expenses. In 2003, hedging of own capital in SEK and PLN was introduced.

Foreign subsidiaries

In consolidated accounts all items in the income statement of foreign subsidiaries are translated into euro at the average exchange rates for the accounting period and all balance sheet items at the rates on the balance sheet date. Translation differences arising are treated as an adjustment affecting the consolidated equity.

Inventories

Inventories are stated at the lower of cost or net realisable value. The cost of inventories includes a proportionate share of overhead arising from the purchase and production of the goods.

Fixed assets

Fixed assets are stated in the balance sheet at the historical cost less accumulated depreciation. The estimated useful lives that are the basis for depreciation and amortisation are as follows:

- Goodwill 10 years
- Other capitalised expenditure 3-10 years
- Buildings and structures 10-40 years
- Machinery and equipment 3-25 years
- Other tangible assets 5-10 years

Depreciation for decrease of substance has been done on some deposits.

Long-term financial assets include investments which are recorded at their historical cost less depreciation of permanent decreases in value. Gains and losses on the disposal of fixed assets are included in operating income and expenses.

Leasing

Operating and financial lease payments are treated as rentals. Commodities are not treated as fixed assets. Annual leasing charges on the basis of existing leasing agreements are shown in the notes. For financial leasing the differences between Finnish and international accounting practice are shown in the notes as well as their impact on certain key figures.

Revenue recognition

Sales are recorded upon delivery of products or performance of services, net of sales taxes and discounts.

Research and development

Research and development costs are expensed in the financial period during which they are incurred. The research and development costs and their proportion of net sales are presented in the five-year review.



Pension liabilities

The group companies' pension obligations are arranged according to local regulations and practices. In the parent company and in Finnish subsidiaries pension liabilities are covered by insurance. Costs of pensions are recorded as they are earned. Changes in uncovered pension liabilities are entered in the income statement. The pension liability is included in the balance sheet.

Income taxes

Income taxes in the income statement include taxes of the group companies for the financial period, calculated in accordance with local regulations, as well as adjustments to prior year taxes and deferred taxes. Deferred tax assets and liabilities are determined for temporary differences arising between the tax basis of assets and liabilities and their carrying values for financial reporting purposes. Currently enacted tax rate is used in determination of deferred tax income. The balance sheet includes all deferred tax liabilities and the probable realisable amount of deferred tax assets. No deferred tax liability is recognised for undistributed earnings of subsidiaries and revaluations.

Financial ratios

Nordkalk Corporation has a convertible capital loan. In the calculation of financial ratio gearing, it has been treated as equity.

Exchange rates

Country	Currency	Rates at end of period 31. December		Average rates	
		2003	2002	2003	2002
Finland	Euro	1.0000	1.0000	1.0000	1.0000
Sweden	SEK	9.0800	9.1528	9.1258	9.1448
Estonia	EEK	15.6466	15.6466	15.6466	15.6466
Poland	PLN	4.7019	4.0210	4.3989	3.8473



Notes to the Financial Statements
1000 euro

Note 1 Net sales by geographical area
1000 euro and product groups

Geographical area	Group		Parent company	
	2003	2002	2003	2002
Finland	168 489	167 172	120 694	122 291
Sweden	53 624	53 525	202	248
Other EU	13 831	9 131	2 713	2 616
Estonia + Poland	18 697	16 632	139	106
Other Europe	4 889	5 354	578	628
Others	264	220	264	220
Total	259 794	252 034	124 590	126 109
Product groups	Group			
	2003	2002		
Limestone & paper pigments	190 650	181 820		
Quick and hydrated lime	80 033	81 267		
Internal sales	-10 889	-11 053		
Total	259 794	252 034		

Note 2 Personnel expenses
1000 euro

	Group		Parent company	
	2003	2002	2003	2002
Wages and salaries				
Salaries and payments to Board Members and Managing Directors	858	832	280	165
To others	32 038	31 408	19 099	17 837
Bonus to Board Members and Managing Directors	138	165	28	22
Total	33 035	32 406	19 407	18 024
Other personnel expenses				
Pensions and pension premiums	5 026	5 076	3 203	3 095
Other payroll costs	5 747	4 211	1 587	1 614
Total	10 773	9 287	4 790	4 709
Personnel expenses	43 808	41 693	24 197	22 733
Personnel				
As an average during the year	1 330	1 341	611	607
At year end	1 310	1 311	583	593
The President of Nordkalk Corporation is entitled to retire at the age of 62.				

Note 3 Depreciation
1000 euro

	Group		Parent company	
	2003	2002	2003	2002
Depreciation by function				
Production	20 156	20 402	7 621	7 584
Sales, marketing and development	153	158	86	95
Administration	993	1 105	861	944
Other operating expenses, goodwill	801	488		
Total	22 103	22 154	8 568	8 623
Depreciation according to plan				
Goodwill	302	303		
Intangible assets	1 093	1 041	951	921
Mineral deposits and land	1 798	2 123		
Buildings and constructions	3 113	3 381	1 707	1 688
Machinery and equipment	15 378	14 897	5 670	5 791
Other tangible assets	419	408	240	223
Total	22 103	22 154	8 568	8 623

Note 4 Other operating income and expenses
1000 euro

	Group		Parent company	
	2003	2002	2003	2002
Income				
Rents	1 216	1 200	698	733
Profit on sale of fixed assets	87	140	85	132
Other income	5 034	6 297	3 047	3 218
Total	6 337	7 637	3 830	4 083
Expenses				
Depreciation on goodwill	302	303		
Decrease in fixed asset value	6	53		
Loss on sale of fixed assets	47	116	47	116
Taxes on real estate	414	544	117	98
Other expenses	78	452	17	144
Total	847	1 468	181	358

Note 5 Share of result and equity in associated companies
1000 euro

	Country	Shareholding	Share of result		Share of equity	
			2003	2002	2003	2002
		%				
Pargas Vatten Ab	Finland	50,1	0	1	479	479
Lohjan Energiahuolto Oy Loher	Finland	23,1	19	3	102	83
Pargas Hyreshus Ab	Finland	34,1	0	3	40	40
Eliminations			-4	-5		
Total			15	2	621	602

Note 6 Other financial items
1000 euro

		Group		Parent company	
		2003	2002	2003	2002
Exchange rate differences		-692	-277	685	-167
Other financial income	external	137	248	22	23
Other financial expenses	external	2 088	7 200	1 938	6 933
Total		-2 643	-7 229	-1 231	-7 077

Note 7 Dividends, interest income and expenses
1000 euro

	Group		Parent company	
	2003	2002	2003	2002
Dividends from Nordkalk companies			2 769	825
Other dividends	31	46	1 162	383
Interest income from Nordkalk companies			2 646	2 982
Other interest income	195	199	133	122
Interest expenses to Nordkalk companies			13	7
Other interest expenses	8 762	8 236	7 811	7 396
Total	-8 536	-7 990	-1 114	-3 091

Note 8 Extraordinary items
1000 euro

	Group		Parent company	
	2003	2002	2003	2002
Expenses				
Group contribution paid	0	-3 600	0	-3 600
Total	0	-3 600	0	-3 600

Note 9 Direct taxes
1000 euro

	Group		Parent company	
	2003	2002	2003	2002
Taxes in income statement				
Taxes for extraordinary items		-1 044		-1 044
Direct taxes for the year	6 244	9 028	5 785	6 461
Direct taxes from previous years	-10	28	-9	28
Change in deferred tax asset/liability	2 046	-3 297		
Total	8 280	4 715	5 776	5 445
Deferred tax assets				
From valuation and matching differences	2 170	3 454		
Deferred tax assets	2 170	3 454		
Deferred tax liabilities				
From untaxed reserves	13 681	12 675		
From consolidation entries	3 245	3 373		
From valuation and matching differences	287	320		
Deferred tax assets	17 213	16 368		



Note 10
1000 euro

Fixed assets

Group	Goodwill	Intangible assets	Mineral deposits and land	Buildings and constructions	Machinery and equipment	Other tangible assets	Construction in progress
	Acquisition cost Jan. 1, 2003	3 697	10 233	63 739	63 170	236 182	7 787
Exchange rate differences	22	-45	-3 858	-1 456	-1 387	-39	-149
+ Investments		1 006	353	3 460	18 011	358	-1 517
+ Other increases		72	451			26	
- Decreases			-198	-546	-3 519		-1 240
Acquisition cost Dec. 31, 2003	3 719	11 267	60 487	64 628	249 288	8 133	6 892
Accumulated depreciation Jan. 1, 2003	-1 957	-4 108	-10 417	-25 366	-125 546	-4 797	
Exchange rate differences	-20	19	274	377	629	24	
- Depreciation during the year	-302	-1 091	-1 749	-3 093	-15 325	-416	
- Accumulated depreciation for decreases		-1	7	342	4 559		
Accumulated depreciation Dec. 31, 2003	-2 279	-5 181	-11 886	-27 740	-135 683	-5 190	
Residual value Dec. 31, 2003	1 440	6 086	48 601	36 889	113 605	2 943	6 892
Parent Company							
		Intangible assets	Mineral deposits and land	Buildings and constructions	Machinery and equipment	Other tangible assets	Construction in progress
Acquisition cost Jan. 1, 2003		9 027	5 218	26 610	99 641	3 695	824
+ Investments		638		288	2 398	311	1 278
+ Other increases		31		5	570	26	
- Decreases			-198	-44	-81		-811
Acquisition cost Dec. 31, 2003		9 696	5 020	26 859	102 528	4 032	1 291
Accumulated depreciation Jan. 1, 2003		-3 980	-16	-11 307	-55 820	-2 365	
- Depreciation during the year		-951		-1 707	-5 670	-240	
- Accumulated depreciation for decreases		-1		16	70		
Accumulated depreciation Dec. 31, 2003		-4 932	-16	-12 998	-61 420	-2 605	
Residual value Dec. 31, 2003		4 764	5 004	13 861	41 108	1 427	1 291
Shares and participations	Group			Parent Company			
	Shares and participations, associated companies	Shares and participations, others		Shares and participations, subsidiaries	Shares and participations, associated companies	Shares and participations, others	
Acquisition cost Jan. 1, 2003	467	2 590		84 572	467	2 575	
Exchange rate differences							
+ Investments				1 883			
+ Other increases				50			
- Decreases		-5					
Acquisition cost Dec. 31, 2003	467	2 585		86 503	467	2 575	
Accumulated depreciation Jan. 1, 2003	175	-531				-531	
- Depreciation during the year							
+/- Other changes	15						
Accumulated depreciation Dec. 31, 2003	190	-531				-531	
Residual value Dec. 31, 2003	657	2 054		86 503	467	2 044	

Note 11

Shares and participations Dec. 31, 2003

	Group holding		Nominal value		Book value, euro	
	Number of shares	%	Currency		Parent company	Group
Subsidiaries						
Inkoo Shipping Oy Ab	3 000	60.0	EUR	504 564	506 582	506 582
Kalkproduktion Storuğns AB	30 000	66.7	SEK	300 000		363 877
Nordkalk AB	250 000	100.0	SEK	25 000 000	34 238 288	34 238 288
Nordkalk AS	15 000	100.0	EEK	15 000 000	4 849 832	4 849 832
Nordkalk GmbH	1	100.0	EUR	50 000	50 000	50 000
Nordkalk Lease AB	100 000	100.0	SEK	10 000 000	0	1 651 982
Nordkalk i Luleå AB	2 500	100.0	SEK	250 000	0	27 753
Nordkalk Miedzianka S.A.	1 679 744	96.2	PLN	16 797 440	33 634 610	33 634 610
Nordkalk Sp. z o.o.	300 000	100.0	PLN	30 000 000	9 347 782	9 347 782
Ab Pargas Broborg	1 500	100.0	EUR	2 523	297 640	297 640
Suomen Karbonaatti Oy	12 495	51.0	EUR	2 101 508	3 578 740	3 578 740
Total subsidiaries					86 503 474	88 547 087
Associated companies:						
Lohjan Energiahuolto Oy Loher	6	23.1	EUR	50 456	171	102 481
Pargas Hyreshus Ab	1 022	34.1	EUR	1 719	82 010	76 394
Pargas Vatten Ab	22 500	50.0	EUR	378 423	384 576	478 712
Total associated companies					466 757	657 587
Other companies:						
Archipelagia Golf Ab Oy	10	0.0	EUR	1 682	20 523	20 523
OOO Kamennyi Lev	1	100.0	RUR	200 000		0
Köpings Företagarforum AB	1	0.1	SEK	5 000		551
Lappeenrannan Kerho Oy	15	0.0	EUR	0	138	138
Lappeenrannan Urheilutalo	34	0.0	EUR	0		0
Lohjan Puhelin Oy	5	0.0	EUR	84		135
Pargas Idrotts- och ungdomsgård Ab	1 500	0.0	EUR	12 614	12 816	12 816
Pargas Telefon Ab	4 100	0.0	EUR	2 758	10 061	10 061
Päijät-Hämeen Puhelinyhdistys	17	0.0	EUR	0	1 293	1 293
AS Rocca al Mare Suurhall	4	0.1	EEK	40	0	9 587
Savonlinnan Puhelinyhdistys	9	0.0	EUR	3 027	3 252	3 252
Specialty Minerals Nordic Oy Ab	11 680	4.7	EUR	330 394	1 434 643	1 434 643
Suur-Savon Sähkö Oy	250	0.0	EUR	420	86	86
Vaasan Läänin Puhelin Oy	2	0.0	EUR	27	342	342
Vakka-Suomen Puhelin Oy	9	0.0	EUR	151	1 170	1 170
Vasa Telefon Ab	2	0.0	EUR	27	740	740
Verdalskalk AS	30	10.0	NOK	3 000 000	456 983	456 983
Viljavuuspalvelu Oy	6 490	13.0	EUR	109 154	101 779	101 779
Total other companies					2 043 825	2 054 098

Note 12
1000 euro

Currents assets

Inventories	Group		Parent Company	
	Dec. 31, 2003	Dec. 31, 2002	Dec. 31, 2003	Dec. 31, 2002
Materials and supplies	15 720	14 525	8 912	8 132
Finished goods and work in progress	17 418	14 729	9 967	7 875
Advance payments	14	13	11	
Total	33 152	29 267	18 890	16 007
Short-term receivables	Group		Parent Company	
	Dec. 31, 2003	Dec. 31, 2002	Dec. 31, 2003	Dec. 31, 2002
ACCOUNTS RECEIVABLE				
Nordkalk group			2 631	2 604
Associated companies	80	397	50	363
Other	28 339	26 958	12 113	11 752
Total	28 419	27 354	14 794	14 719
PREPAID EXPENSES AND ACCRUED INCOME				
Nordkalk group			1 567	1 536
Associated companies				
Other	2 079	1 886	1 530	1 759
Total	2 079	1 886	3 097	3 295
OTHER RECEIVABLES				
Nordkalk group	135			
Associated companies				
Others	2 300	2 482	20	26
Total	2 434	2 482	20	26
SUMMARY				
Nordkalk group	135		4 198	4 140
Associated companies	80	397	50	363
Others	32 717	31 326	13 663	13 537
Total	32 932	31 723	17 911	18 040
SPECIFICATION OF PREPAID EXPENSES AND ACCRUED INCOME, EXTERNAL				
Financial items	1 178	110	1 178	110
Tax receivables	84	1 649		1 649
Others	816	127	352	
Total	2 079	1 886	1 530	1 759

Note 13
1000 euro

Change in shareholders' equity

	Group		Parent Company	
	2003	2002	2003	2002
Share capital Jan. 1	65 676	65 676	65 676	65 676
Changes				
Share capital Dec.31	65 676	65 676	65 676	65 676
Share premium account Jan.1	16	485	16	16
Translation differences	0	8		
Other changes	0	-476		
Share premium account Dec.31	16	16	16	16
Other restricted equity Jan.1	508	36		
Translation differences	0	-4		
Other changes	238	476		
Other restricted equity Dec.31	746	508	0	0
Capital loan Jan.1	100 000	100 000	100 000	100 000
Decrease	-43 980		-43 980	
Increase				
Capital loan Dec.31	56 020	100 000	56 020	100 000
Net profit for previous years Jan.1	35 798	35 399	31 362	28 577
Dividends paid	-13 792	-3 284	-13 792	-3 284
Translation differences	-3 485	-4 382		
Other changes	-585	-14		
Net profit for previous years Dec.31	17 936	27 719	17 570	25 293
Net profit for the period	12 944	8 079	15 739	6 069
Total shareholders' equity	153 338	201 997	155 021	197 054
Distributable equity				
Net profit for previous years	17 936	27 719	17 570	25 293
Advanced dividend	13 792		13 792	
Net profit for the period	12 944	8 079	15 739	6 069
Equity share of untaxed reserves	-25 028	-25 831		
Other non-distributable equity	-191	-172		
Total distributable equity	19 453	9 795	47 101	31 362

Note 14 Provisions
1000 euro

	Group		Parent Company	
	Dec. 31, 2003	Dec. 31, 2002	Dec. 31, 2003	Dec. 31, 2002
Provision for financial costs	5 378	6 933	5 378	6 933
Provision for restructuring	1 139	1 170		
Provision made for future environmental responsibilities	728	794	155	187
Total	7 245	8 898	5 533	7 120

Note 15 Long-term liabilities
1000 euro

	Group		Parent Company	
	Dec. 31, 2003	Dec. 31, 2002	Dec. 31, 2003	Dec. 31, 2002
Loans from financial institutions	50 346	9 560	40 000	
Pension fund loans	2 260	2 244		
Deferred tax liability (Note 9)	17 213	16 368		
Other interest-bearing liabilities	5 332	3 991		
Other non interest-bearing liabilities	162	258	162	547
Total	75 313	32 419	40 162	547
Long-term interest-bearing liabilities	57 938	15 794	40 000	
Repayments of long-term liabilities	Year 2-5	Over 5	Year 2-5	Over 5
Loans from financial institutions	48 632	1 714	40 000	
Pension fund loans		2 260		
Deferred tax liability (Note 9)	251	16 962		
Other interest-bearing liabilities	3 355	1 977		
Other non interest-bearing liabilities	0	162	0	162
Total	52 238	23 075	40 000	162

Note 16
1000 euro

Short-term liabilities

SHORT-TERM NON INTEREST-BEARING LIABILITIES	Group		Parent Company	
	Dec. 31, 2003	Dec. 31, 2002	Dec. 31, 2003	Dec. 31, 2002
ACCOUNTS PAYABLE				
Nordkalk group			775	550
Associated companies		16		16
Others	16 587	18 331	7 322	8 617
Total	16 587	18 347	8 097	9 183
ADVANCES RECEIVED				
Others	34	260		
Total	34	260		
ACCRUED EXPENSES AND DEFERRED INCOME				
Nordkalk group			8	175
Associated companies				
Others	8 158	8 973	6 015	7 136
Total	8 158	8 973	6 023	7 311
OTHER NON INTEREST-BEARING LIABILITIES				
Nordkalk group				
Group contribution		3 600	0	3 600
Others	22 742	8 913	16 789	2 084
Total	22 742	12 513	16 789	5 684
SUMMARY				
Nordkalk group			783	725
Group contribution		3 600		3 600
Associated companies		16		16
Others	47 521	36 477	30 126	17 837
Total short-term non interest-bearing liabilities	47 521	40 093	30 909	22 178
SHORT-TERM INTEREST-BEARING LIABILITIES				
REPAYMENT OF LONG-TERM LIABILITIES				
Nordkalk group				
Others	3 213	5 456		
OTHER INTEREST-BEARING LIABILITIES				
Nordkalk group				661
Others	2 198	95	355	
Total short-term interest-bearing liabilities	5 411	5 550	355	661
Total short-term liabilities	52 932	45 643	31 264	22 839
SPECIFICATION OF ACCRUED EXPENSES AND DEFERRED INCOME, EXTERNAL				
Sales related items	749	747	361	269
Personnel costs	4 283	4 111	3 623	3 537
Guarantee liabilities		18		18
Taxes	936	2 240	886	2 011
Financial items	1 084	1 297	1 005	1 177
Others	1 106	560	140	124
Total	8 158	8 973	6 015	7 136

Note 17 **Pledged assets, contingent liabilities and leasing contracts**
1000 euro

	Group		Parent Company	
	Dec. 31, 2003	Dec. 31, 2002	Dec. 31, 2003	Dec. 31, 2002
PLEGDED ASSETS				
Real estate mortgages as security for own debts				
Loans from financial institutions	40 106	529	40 000	
Mortgages	199 801	202	198 843	
Other mortgages				
Other short-term debts				
Mortgages	551	546		
Total mortgages	200 352	748	198 843	
Other pledged assets				
Long-term interest-bearing liabilities		42		
Other pledges	129 574	959	128 615	
Total other pledged assets	129 574	959	128 615	
Pledged assets for other own liabilities than debts				
Real estate mortgages	959	959		
Other mortgages	34	791	34	34
Total	330 918	3 457	327 492	34
CONTINGENT LIABILITIES				
Guarantees:				
For subsidiaries			11 973	7 940
For associated companies	269	269	269	269
For other	1 000	208	210	200
Pension fund liability	45	45		
Other contingent liabilities	52	40		
Total	1 366	562	12 452	8 409
LEASING CONTRACTS				
In accordance with current leasing contracts leasing fees during the next years will amount to:				
Next 12 months	6 379		4 344	
Later	30 990		26 309	
Total	37 369		30 653	

Note 18 Adjustment for financial leasing

The effects of recording leasing contracts in the balance sheet as assets and liabilities and leasing charges as depreciations, repayments and interest expenses.

MEUR

	Operating profit		Financial items		Profit after financial items	
	2003	2002	2003	2002	2003	2002
Income statement						
As shown in the income statement	35,3	35,2	-11,2	-15,2	24,2	20,0
Adjustment for interest expenses included in leasing charges	1,1	1,2	-1,1	-1,2	-	
Adjusted Income Statement	36,4	36,4	-12,3	-16,4	24,2	20,0

	Fixed assets		Liabilities		Balance Sheet total	
	2003	2002	2003	2002	2003	2002
Balance Sheet						
Balance Sheet value as shown	219,2	225,2	128,1	78,0	300,0	300,7
Residual value of leased assets	28,8	31,8	28,8	31,8	28,8	31,8
Adjusted Balance Sheet	248,0	257,0	156,9	109,8	328,8	332,5

Solvency (%)

According to the Financial Statements	36.2	37.9
After adjustments in the Income Statement and in the Balance Sheet	33.0	34.2

Note 19 Main terms and conditions of the capital loan

Nordkalk issued a Capital Loan in 1999. When NK-Holding bought Nordkalk, a right arose for the bond holders, according to the terms of the loan, to request redemption of the bonds at any time. Up to now, EUR 44 million have been redeemed, which means that the parent company has a capital loan of EUR 56 million.

Main terms and conditions are the following:

1. The loan is a capital loan as specified in the Finnish Companies Act. Status of the loan, as well as terms and conditions concerning repayment and interest, are different to those of a regular loan.

Repayment of the principal and payment of interest require that certain conditions are met. Should the Company be placed in liquidation or bankruptcy, the principal, interest and other yield shall be payable only at a priority inferior to that of all other creditors.

2. The maturity of the loan shall be from 28 October 1999 through 28 October 2004. The loan shall be repaid in a single instalment on 28 October 2004 in case the shares of the company have not been listed for public trading.

3. The loan shall pay annual fixed interest of 6.71%. In addition, the terms of the loan stipulate an annual 2% additional interest for the whole loan period. This can be paid either with redemption of the loan or at the end of the loan period.

4. The loan is listed on the I-List of HEX Ltd, Helsinki Stock Exchange.

Complete terms and conditions of the loan are available on www.nordkalk.com.



Note 20
1000 euro

Nominal values of derivative instruments

	Dec. 31, 2003	Dec. 31, 2002
Nominal value		
Foreign exchange forward contracts	76 347	51 451
of which closed contracts	0	0
Forward contracts of electricity	11 994	17 992
of which closed contracts	0	2 000
Interest rate swap	52 000	
of which closed contracts	0	
Market value		
Foreign exchange forward contracts	1 435	201
Forward contracts of electricity	1 255	7 165
Interest rate swap	615	
The principle observed in calculating market value:		
Foreign exchange forward contracts, forward contract of electricity and interest rate swap are valued at market values on the balance sheet date.		
Derivative instruments are used to reduce currency, purchase and interest risk of the Group		

Calculation of Financial Ratios

Return on capital employed (ROC), %

$\frac{\text{Profit after financial items} + \text{financial expenses}}{\text{Balance sheet total} - \text{non interest-bearing liabilities, average over the year}} \times 100$

Return on equity (ROE), %

$\frac{\text{Profit after financial items} - \text{taxes in the income statement}}{\text{Shareholders' equity} + \text{minority interest, average over the year}} \times 100$

Interest coverage

$\frac{\text{Operating profit} + \text{financial income}}{\text{Interest expenses}}$

Value added

$\frac{\text{Operating profit} + \text{personnel costs} + \text{depreciation}}{\text{Personnel on average}}$

Gearing, %

$\frac{\text{Interest bearing liabilities} - \text{cash and bank balances} - \text{other interest-bearing receivables}}{\text{Shareholders' equity} + \text{minority interest}} \times 100$

Solvency ratio, %

$\frac{\text{Shareholders' equity} + \text{minority interest}}{\text{Balance sheet total} - \text{advances received}} \times 100$

Earnings per share (EPS), euro

$\frac{\text{Profit after financial items} - \text{taxes in the income statement} - \text{minority interest}}{\text{Number of shares over the financial year}}$

Equity per share, euro

$\frac{\text{Shareholders' equity}}{\text{Number of shares at the end of the financial year}}$

Five-year Review

		2003	2002	2001	2000	1999
From Income statement						
Net sales	Meuro	259.8	252.0	215.9	202.8	187.4
change	%	3.1	16.7	6.5	8.2	-2.0
foreign sales	%	35.1	33.7	35.7	35.8	32.8
Operating profit	Meuro	35.3	35.2	24.1	20.3	25.5
% of net sales	%	13.6	14.0	11.2	10.0	13.6
Profit after financial items	Meuro	24.2	20.0	18.0	15.7	19.0
% of net sales	%	9.3	7.9	8.3	7.8	10.2
Profit before taxes and minority	Meuro	24.2	16.4	4.5	15.2	27.2
% of net sales	%	9.3	6.5	2.1	7.5	14.5
Net profit/loss for the period	Meuro	12.9	8.1	-0.1	7.9	18.2
From balance sheet						
Fixed assets	Meuro	219.2	225.2	223.9	209.6	178.4
Inventories	Meuro	33.2	29.3	30.0	28.5	24.4
Other current assets	Meuro	47.7	46.2	43.3	53.2	74.6
Minority interest	Meuro	11.2	11.7	9.0	8.5	7.4
Equity	Meuro	153.3	202.0	201.6	199.8	196.8
Interest-bearing liabilities	Meuro	63.3	21.3	20.1	15.1	17.3
Non interest-bearing liabilities	Meuro	72.1	65.6	66.6	67.9	56.0
Balance sheet total	Meuro	300.0	300.7	297.2	291.3	277.5
Financial ratios						
Gross capital expenditure	Meuro	21.7	29.4	33.0	49.1	31.6
% of net sales	%	8.3	11.7	15.3	24.2	16.9
Depreciation	Meuro	22.1	22.2	21.2	19.3	16.9
Research and Development costs	Meuro	4.5	4.5	3.9	3.7	3.4
% of net sales	%	1.7	1.8	1.8	1.8	1.8
Capital employed CB	Meuro	227.9	235.1	230.7	223.4	221.5
Return on capital employed	%	15.4	15.3	11.0	10.4	14.0
Return on equity	%	14.3	13.6	14.0	9.5	16.8
Gearing	%	30.8	4.8	4.1	-1.3	-11.6
Interest coverage	times	4.1	4.3	3.3	3.1	6.3
Solvency ratio excl capital loan	%	36.2	37.9	37.2	37.2	37.6
Share key ratios						
Earnings per share (EPS)	euro	0.39	0.35	0.41	0.26	0.38
Equity per share	euro	2.96	3.11	3.09	3.04	2.95
Number of shares used in calculation of key ratios	1000 shares	32,838	32,838	32,838	32,838	32,838
Nominal value	euro	2	2	2	2	2
Per employee						
Net sales	1,000 euro	195	188	151	156	177
Value added		76	74	60	59	73
Wages and salaries		33	31	28	29	33
Profit after financial items		18	15	13	12	18
Personnel on average						
Personnel end of period		1,330	1,341	1,433	1,302	1,060
		1,310	1,311	1,308	1,435	1,029



Auditors' Report

To the shareholders of Nordkalk Corporation

We have audited the accounting records and the financial statements, as well as the administration by the Board of Directors and the President of Nordkalk Corporation for the year ended 31 December 2003. The financial statements prepared by the Board of Directors and the President include the report of the Board of Directors, consolidated and parent company income statements, balance sheets, cash flow statements and notes to the financial statements. Based on our audit we express an opinion on these financial statements and the company's administration.

We have conducted our audit in accordance with Finnish Generally Accepted Auditing Standards. Those standards require that we plan and perform the audit in order to obtain reasonable assurance about whether 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 the management, as well as evaluating the overall financial statement presentation. The purpose of our audit of the administration has been to examine that the Board of Directors and the President have complied with the rules of the Finnish Companies Act.

In our opinion, the financial statements, showing a profit of EUR 12,944.000 in the consolidated income statement and a profit of EUR 15,739.000 in the parent company income statement, have been prepared in accordance with the Finnish Accounting Act and other rules and regulations governing the preparation of financial statements in Finland. The financial statements give a true and fair view, as defined in the Accounting Act, of both the consolidated and parent company result of operations, as well as of the financial position. The financial statements can be adopted and the members of the Board of Directors and the President of the parent company can be discharged from liability for the period audited by us. The proposal made by the Board of Directors on how to deal with the result is in compliance with the Finnish Companies Act.

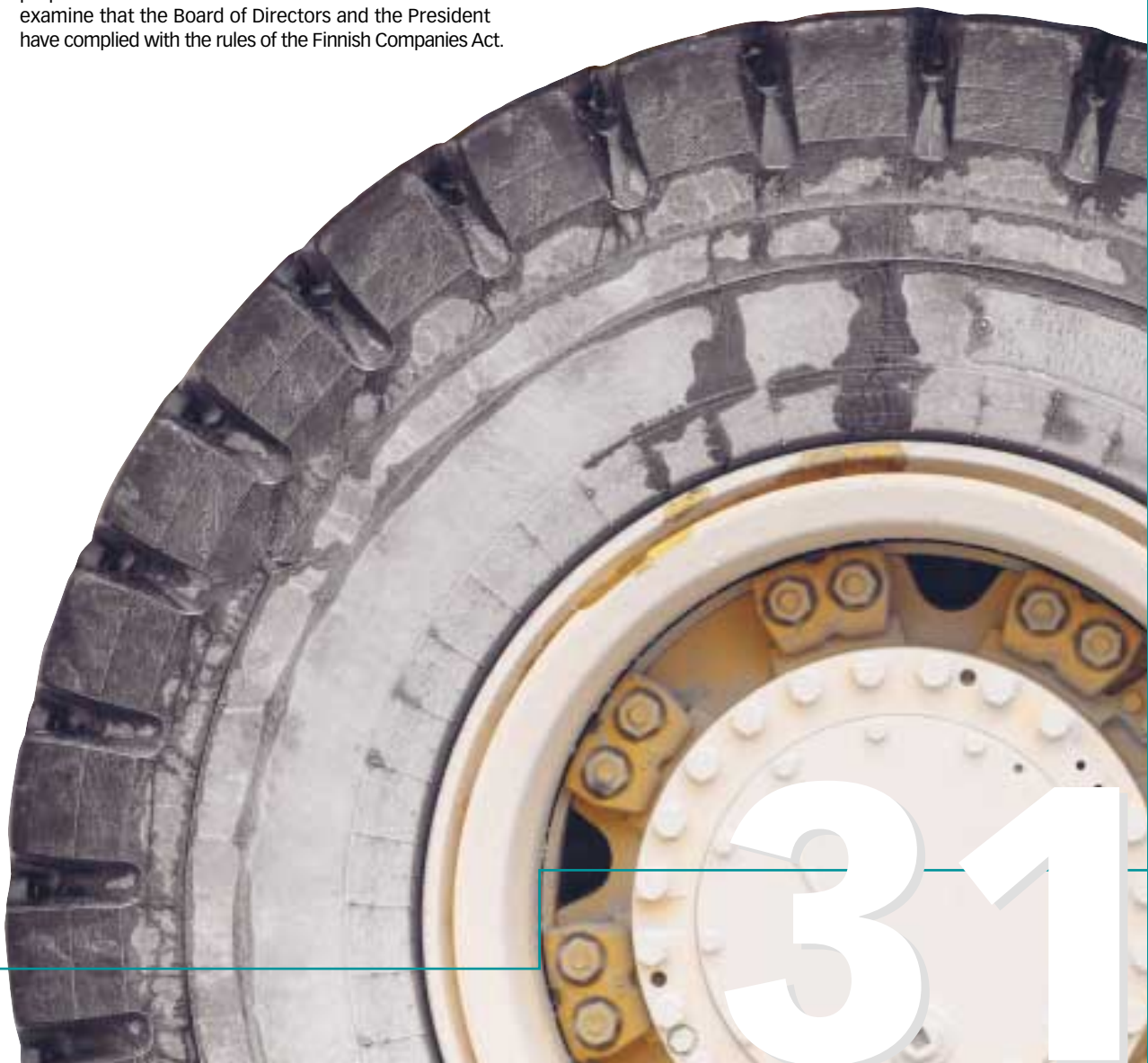
Helsinki, 28 January 2004

Sixten Nyman

**Authorized
Public Accountant**

Solveig Törnroos-Huhtamäki

**Authorized
Public Accountant**



Board of Directors and Management Group

Board of Directors 1.1.-12.2.2003

Kari Heinistö
b. 1958
Chairman of the Board
M.Sc. (Econ.)
Senior Executive
Vice President,
KONE Materials Handling

Carl-Gustaf Bergström
b. 1945
M.Sc. (Econ.)
President, KONE Materials
Handling

Patrick Enckell
b. 1937
Lic.Sc. (Eng.)

Christer Sundström
b. 1943
M.Sc. (Chem.)
President, Nordkalk

Board of Directors 12.2.2003-

Björn Mattsson
b. 1941
Chairman of the Board
Lic. Phil.,
Honorary Counsellor

Morten Ahlström
b. 1943
M.Sc. (Econ.)
Chairman of the Board,
Ahlström Capital

Jan Inbarr
b. 1948
B.Sc. (Econ.)
President and CEO,
Ahlström Capital

Jukka Järvelä
b. 1969
M.Sc. (Econ.)
Partner, CapMan

Orvo Siimestö
b. 1943
M.Sc. (Econ.)
Senior Advisor, CapMan

Christoffer Taxell
b. 1948
LL.M.

Management Group

Christer Sundström
b. 1943
M.Sc. (Chem.)
President, Nordkalk
Employed by the company
since 1974

Gunilla Bergmann
b. 1956
B.Sc. (Econ.)
Communications Director
Employed by the company
since 1998

Kjell Bartzner
b. 1943
M.Sc. (Econ.)
Director, Carbonate
Sweden
Employed by the company
since 1971

Jarmo Ellmén
b. 1953
M.Sc. (Econ.)
Financial Director
Employed by the company
since 2003

Eelis Eskelinen
b. 1953
M.Sc. (Eng.)
Director, Paper Pigments
Employed by the company
since 1980

Paavo Nikkari
b. 1947
M.Sc. (Agr.)
Director, Carbonate Finland
Employed by the company
since 1981

Kim Nordell
b. 1959
M.Sc. (Econ.)
Financial Director
Employed by the company
since 1983

Esa Tikka
b. 1953
M.Sc. (Econ.)
Director, Poland & Germany
Employed by the company
since 1980

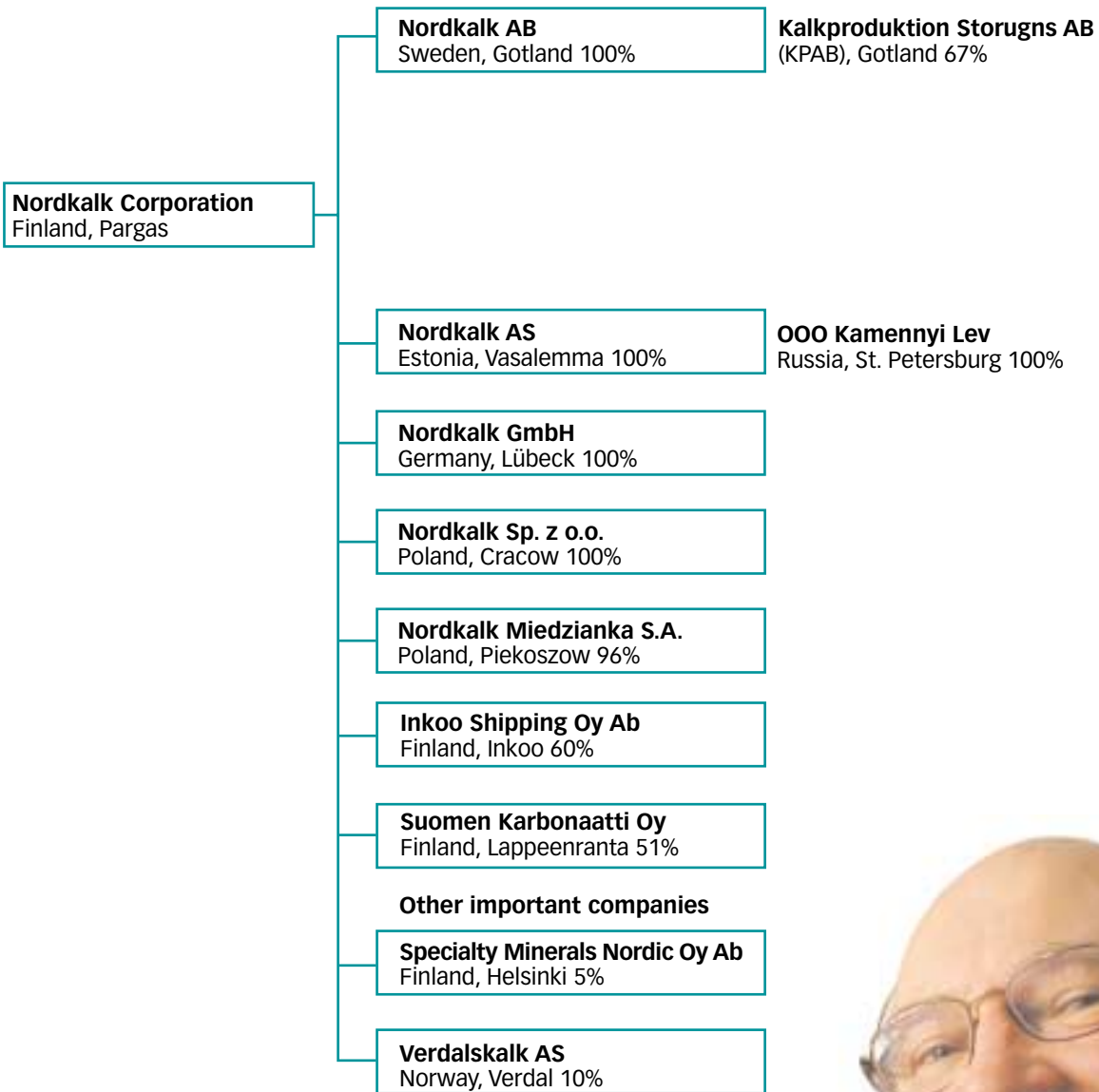
Tarmo Tuominen
b. 1962
M.Sc. (Geol.)
Director, Industrial Lime
Employed by the company
since 1982

Kari Vainio
b. 1955
LL.M.
Director, legal affairs and
personnel
Employed by the company
since 1993

Christoffer Taxell, Jukka Järvelä, Morten Ahlström, Björn Mattsson, Jan Inbarr and Orvo Siimestö



Group Structure





*Tea Rasikannas, laboratorian,
Pargas*



Personnel Report 2003



Personnel 2003

At the end of the year 2003 Nordkalk employed a total of 1 310 people (compared with 1 311 the previous year). Twenty per cent of the employees are female and 80 per cent male. Wage-earners account for 66 per cent and salaried staff for 34 per cent of the personnel.

In summer 2003 Nordkalk and the Polish ministry responsible for privatisation signed an agreement whereby Nordkalk purchased the Miedzanka limestone company at Kielce in southern Poland. In the interests of efficiency the number of workers employed by what is now Nordkalk Miedzanka S.A. was reduced during the year according to plan following agreement between employer and employee organisations. At year-end the number of employees at Miedzanka amounted to 249 while they totalled 418 when the company was privatised. Operations at Miedzanka have become more efficient as a result of outsourcing those activities that do not form part of Nordkalk's core competencies and of investment in automation, for example.

In Finland and Sweden almost a third and in Poland more than a half of Nordkalk employees have worked for the company for more than ten years. On the basis of their experience alone Nordkalk's workers are professionals.

Tomas Österman, charger, quarry of Pargas

Developing the Personnel

The aim of personnel development is to guarantee the level of their skills and know-how on which so much of Nordkalk's competitiveness depends and to develop them on a systematic and long-term basis. The professional competence and know-how of the personnel are developed continually at work and on Nordkalk's internal training courses as well as during external training given by outside instances. In addition to developing special professional skills the usual areas include leadership and management together with computer skills and foreign languages.

In early spring 2003 Nordkalk started a wide-ranging course for foremen and supervisors corresponding to the needs revealed in a personnel survey. These include the need to give feedback, and the ability to listen the workers and to make use of what is heard in everyday operations. The course offers foremen tips for all kinds of interaction with their subordinates and especially for development discussions with them. In 2003 about 60 foremen attended such courses in Finland and Sweden. In 2004 the programme will continue until all foremen in Finland and Sweden have attended the courses. A corresponding programme for foremen in Poland was run earlier as part of a wider training programme. The first development programme for the personnel in Poland was completed during the year under review. The programme covered such topics as cooperation in groups consisting of personnel from Poland and other countries, where experiences in the fields of geology, production and the environment were exchanged; sales and market training aimed at more active efforts in these fields; and courses in English and German.

By developing the skills of the personnel Nordkalk aims to ensure the right quantity and quality of its human resources. In January Nordkalk introduced a recruitment page on its website; this resulted a total of some 250 applications for employment. Of these about half are for summer jobs.

There are no educational institutions in Finland that offer courses for mine workers. For this reason Nordkalk has been involved with other companies in the mining industry in efforts to formulate a further qualification for the industry. This qualification can be taken either on completion of an apprenticeship or on the basis of relevant work experience. The preliminary work on such a further qualification has now been completed and since the end of the year 2003 detailed studies have been started at Nordkalk's Tytyri plant. These will facilitate Nordkalk's training of its own apprentices when the appropriate authorities have approved the qualification and so help to ease the expected dearth of skilled miners as present employees retire in the near future.

Nordkalk's Human Resources Policy

We have a Human Resources policy to ensure uniformity and equality in the way we manage our people.

Nordkalk corporate values – trust, quality and competence – form the basis of our Human Resources policy:

- We trust ourselves and our colleagues and partners. Working in a confident workplace atmosphere is productive and pleasant.
- Our aim in all operations is the right quality.
- Our competence and its continuous improvement give us the possibility to deliver intelligent solutions to our customers

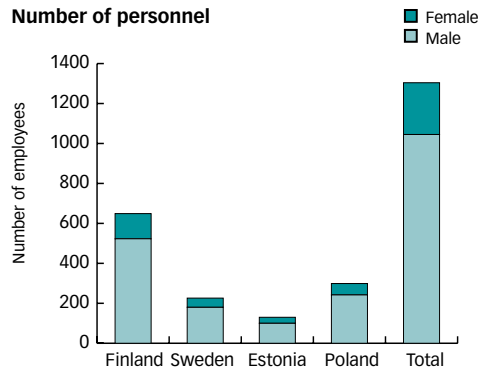
Our success depends on each of us, because together as individuals we form Nordkalk.

Management is based on building trust, commitment and ensuring a common direction.

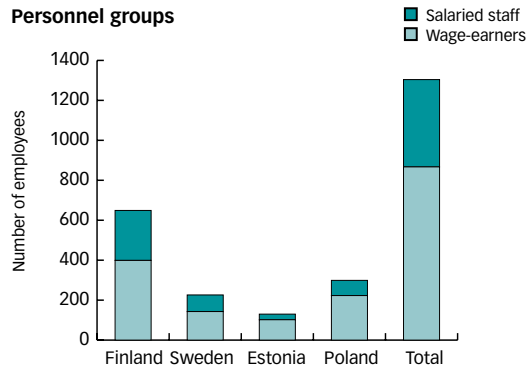
Our employees are talented, inspired and proud of their professional competence. They continuously develop their knowledge, skills and workplace atmosphere. Together we achieve the company's objectives through the following principles:

1. We treat all our employees equally.
2. Our activities are conducted to the highest ethical standards.
3. We value competence, experience and encourage continuous learning. The needs of both the individual and the company are taken into consideration when planning personal development.
4. We are all responsible for creating a positive workplace atmosphere. Giving and receiving of constructive feedback is an important part of this development work.
5. We are all responsible for working safely and taking care of the environment.
6. Our enthusiastic atmosphere furthers creativity and innovation.
7. We recruit as an investment in the future. Employment opportunities also promote job rotation. We always seek to appoint the most suitable candidate.
8. Remuneration is based on the requirements of the position and on performance.
9. We believe that success at work is based on a healthy balance between work and leisure time.
10. By working together we can improve the flow of information, become more efficient and develop, both individually and as a company.

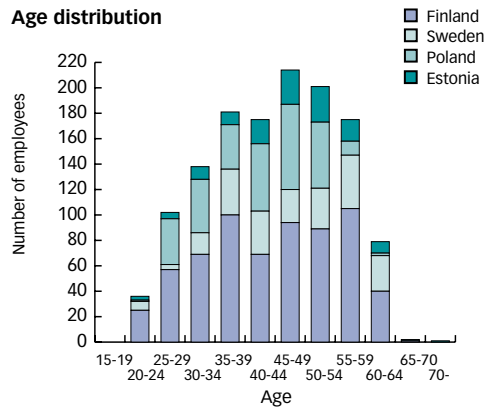
Number of personnel



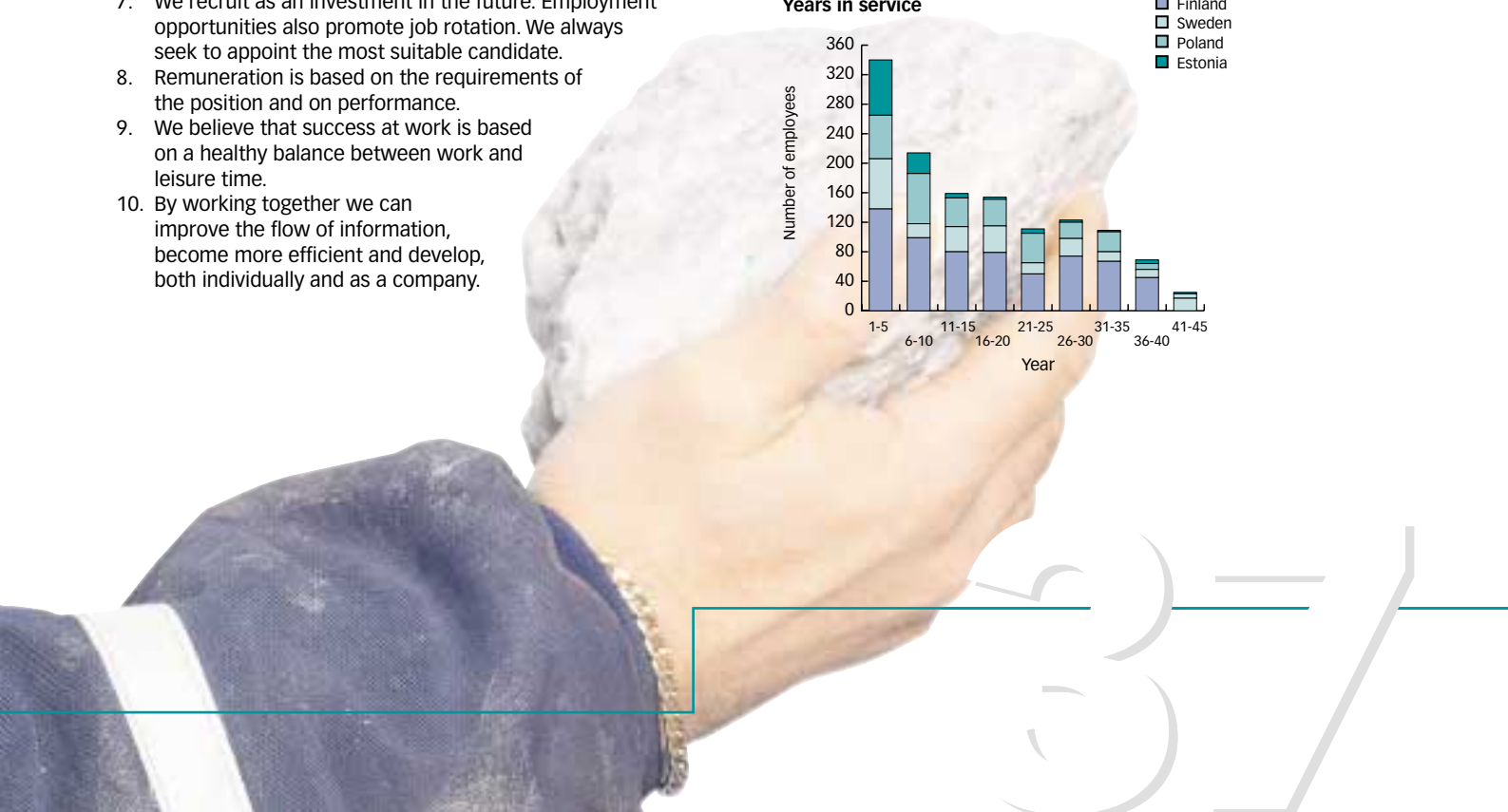
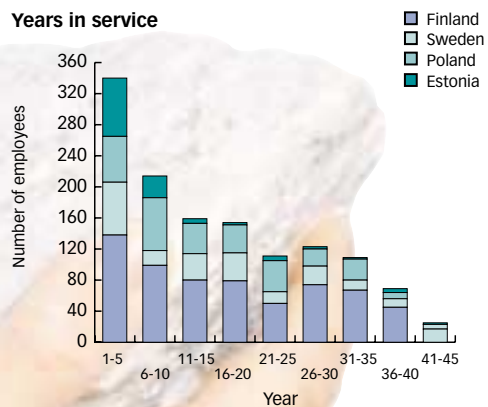
Personnel groups



Age distribution



Years in service



The 55+ Programme

In Finland 22 per cent of Nordkalk's workforce is over 55; the corresponding figure for Sweden is 31 per cent. Similarly the figures for over 50 are 36 and 45 per cent. This means that a large proportion of Nordkalk's workers retire in the near future. With them will disappear much of Nordkalk's know-how. This gave the impulse for the 55+ programme, which was begun in spring 2002. In Poland and Estonia the age distribution of the labour force is much more even.

The goal of the 55+ programme is to ensure

- that Nordkalk's ageing workforce is motivated and physically fit right up to retirement age or as close to it as possible
- that the employees' know-how is retained and used efficiently throughout Nordkalk
- and that Nordkalk is an interesting company to work for.

If we compare the age distribution of Nordkalk's workforce with the pension company's statistics, then it is clear that Nordkalk has twice as many employees in the age groups 55-59 and 60-65 than the average among the pension company's clients. This shows that older workers work longer and are happier in their work at Nordkalk than on average.

The practical measures taken as part of the 55+ programme in the course of 2003 included in-depth discussions with office staff over the age of 55+ in Finland and Sweden and voluntary medical checks in Finland. In the courses for foremen stress was laid on how these in-depth discussions should be conducted and how the interests of the ageing workforce should be taken into consideration. In February Nordkalk started a mentor programme aimed at ensuring that the experience and know-how accumulated by workers who have long been in Nordkalk's employ and that cannot be learned by way of formal study are handed down to the next generation. The year-long programme was attended by 11 pairs of mentors with representatives from Finland, Sweden, Poland and Estonia. The experiences gained from this exercise were encouraging and the programme will continue.

The further qualification for the mining industry referred to earlier is also a step in Nordkalk's efforts to safeguard the know-how that Nordkalk has.

Health and Safety

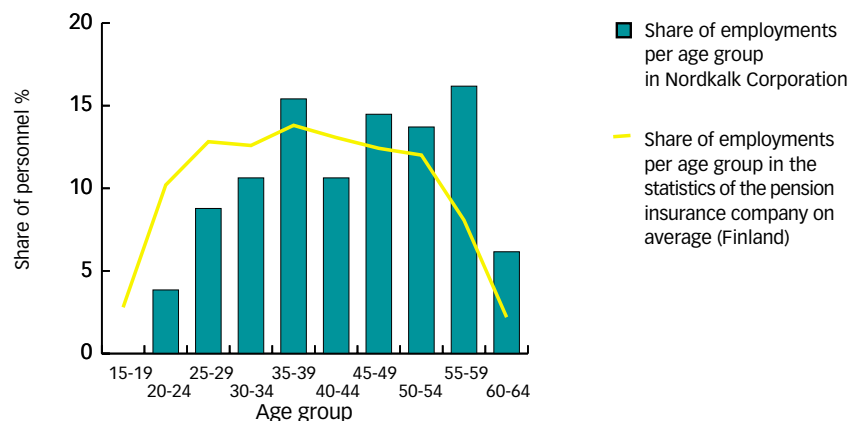
After Nordkalk became an independent company, it was necessary for the company to evolve its own health and safety practices. During the year 2003 several new projects were begun to improve the safety, work capacity and well-being of the firm's employees. Stress was laid on cooperation between personnel administration and those responsible for industrial safety and health care.

To coordinate its efforts in the field of industrial health and safety Nordkalk set up a special Industrial Health and Safety back-up group in Finland. The members of this group are the Personnel Director, two persons with responsibility for industrial safety, the risk-management director and the company doctor. The group met four times during the first year of its existence. It drew up a list of guidelines for industrial safety at Nordkalk's plants in Finland; these were approved in autumn 2003.

The main aim of Nordkalk's industrial safety activities is to prevent accidents, occupational disease and illness among the personnel. For accidents and occupational diseases the aim has been set as zero. In collaboration with line management the industrial safety and health-care personnel indicate the shortcomings that may affect the employees' ability to do their jobs and are planning improvements. Detailed industrial safety programmes have been drawn up in the different towns and plants where Nordkalk operates, and these are updated when necessary.

In Lappeenranta the pilot project "Zero tolerance for accidents" was started and this will continue until 2006. During the present year the target is to reduce the number of accidents by a half and encourage workers to report "near misses". It is hoped that the number of reported incidents will double. Nordkalk hopes to achieve these goals by training and changing attitudes.

Age distribution in Nordkalk compared to the average of the pension insurance company



The work began by charting the personnel's attitudes with regard to industrial safety. The importance of industrial safety will be emphasised during the year in different ways.

The back-up group has updated Nordkalk's industrial safety and work environment guide. Together with the industrial safety programme the guide provides a package of information that will be distributed to all employees during the course of the year in conjunction with different training courses. Information about industrial safety will also be disseminated among the different outside entrepreneurs, e.g. transportation contractors, whose services Nordkalk uses.

At all the locations where Nordkalk has operations in Finland the task of charting industrial risks has continued, in accordance with legal requirements. This is done for each job. The personnel have been enthusiastic in their attitude to this enquiry.

In addition to the fire and rescue exercises prescribed by law, exercises and first-aid courses were held at Lappeenranta, Pargas and Tytyri, for example. At Pargas a major catastrophe exercise was organised to test the preparedness and ability to cooperate of the fire brigade, police, health centre, voluntary organisations and other companies in the area in the face of emergency situations.

Elsewhere, in other countries where Nordkalk operates, industrial safety rules that comply with local legal requirements are applied. In Sweden the documents prescribed in the rules (Systematiskt Arbetsmiljöarbete) drawn up by the Swedish Work Environment Authority have been collated into a data base covering directives for the whole company and for each production site. These directives cover a wide range of issues concerning work environment, from recreation to protective equipment.

No accidents resulting in death occurred at any of Nordkalk's plants in the year. Accidents that led to three or more days absence amounted to 20 at plants in Finland. In Sweden the number was 12 and in Poland four. Unlike Finland the figures also include accidents that did not lead to absence. In Estonia there were no industrial accidents leading to absence.

As far as sickness leave is concerned Nordkalk comes close to the industrial average for Finland. The

percentage of absences among workers at Nordkalk's sites in Finland was 5.8 per cent in 2003. The most recent figure available for the whole of Finland, that for 2002, was 6.2 per cent. In that year the percentage of industrial accident-related absences in the whole of Finland was 0.4 per cent while at Nordkalk it was 0.8 per cent. In 2003 the figure was 0.5 per cent. Accident-related absences in Sweden were 0.1 per cent last year and sickness-related absences 5.1 per cent. The Swedish figures cover both office staff and manual workers and are for the latter half of 2003.

Nordkalk's entire personnel in Finland, Sweden and Poland are covered by health care. Only the Pargas plant has its own health-care centre; elsewhere these services are bought in from outside. The health-care centre at Pargas coordinates Nordkalk's health care throughout Finland and collaborates with industrial safety and personnel administration. Its goal is to harmonise practices and documentation at all of Nordkalk's plants.

In addition the prophylactic health care prescribed by law Nordkalk also offers its employees in Finland general practitioner services and basic laboratory services. Care of the sick focuses on industrial health; in other words, attention is directed primarily towards illnesses that inhibit the capacity to work. During the past year resources have been divided equally between prophylactic measures and treatment of illnesses. Health care has participated actively in the 55+ programme offering the older workers voluntary medical checks.

In Sweden a survey was carried out last year among the personnel about industrial health care, which is being further developed in accordance with the answers received.



Protected by law, the Apollo butterfly (Parnassius apollo) is an extremely endangered species. The rare populations are local and isolated from each other; the strongest populations can be found on the Åland Islands and in the southwestern archipelago. The rareness of the species is considered to be due to toxic heavy metals accumulating in food plants as a result of acidification and the fact that meadows and other open areas favoured by butterflies have become overgrown.



Environmental Report 2003



Our Aim is Sustainable Development

Nordkalk extracts and refines limestone. The impact on the environment of these activities is monitored and evaluated on a continuous basis in accordance with the Nordkalk Group's environmental policy. This report provides an account of how our operations affect the environment together with the measures that have been taken or are planned to reduce any adverse environmental effects.

Nordkalk aims at sustainable development, and the environmental implications of this are taken into account when the company sets up its strategic aims. Nordkalk endeavours to develop its products and processes in order to keep the environmental impact of its extraction and refining operations to a minimum. Careful and diverse monitoring leads to an increased awareness of environmental matters; in order to achieve sustainable development improvements are necessary all the time. All Nordkalk's production plants in Finland and its entire operations in Sweden have been awarded ISO 14001 environmental certificates, which ensures continuous improvements in environmental work. Nordkalk's environmental plans form part of the company's annual strategic planning, and environmental measures are followed up continuously by means of regular audits. Responsibility for production-related environmental matters lies with the division managers.

In addition to the measures taken to protect the environment during production, Nordkalk also offers environmental training to its customers. When drawing up contracts with entrepreneurs and sub-contractors Nordkalk now requires an assurance that its environmental demands will also be met. The sub-contractors are checked regularly in this connection by means of environmental audits.

Nordkalk operates at various locations around the Baltic Sea, and the company tries actively to reduce its own emissions and effluents. Nordkalk is involved in many research and development projects that aim to improve the state of the environment. The recycling of carbon dioxide and waste disposal are just two examples of how Nordkalk works with several Finnish research institutions in this respect. Another is the liming of the Alinen watercourse at Nokia to improve the quality of the water. Nordkalk also participates in the Pro Saaristomeri (Pro Archipelago Sea) project, the aim of which is to improve the quality of the archipelago seawater. At Louhi, for example, Nordkalk cooperates with the South Savo Regional Environmental Centre, the town of Savonlinna and nearby local authorities in a project designed to maintain the right oxygen balance in the upper course of Enovesi, which forms part of the Saimaa lake system. Since 1977 Sweden has carried out the world's largest liming project. Nordkalk has been closely involved in developing the project and also takes an active part in it.

The main principles of Nordkalk's environmental policy

Values and aims

- sustainable development
- compliance with environmental legislation and regulations
- identification of environmental impact of operations
- information about development, measures and results

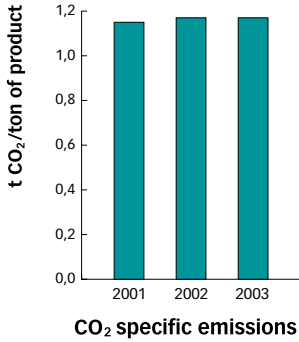
Continuous improvement

- environmental impact taken into account when developing products and processes
- environmental plans form part of strategic planning and cover environmental aspects, aims and investment
- investment plans include an evaluation of the environmental impact of the investment
- environmental work is audited on a regular basis

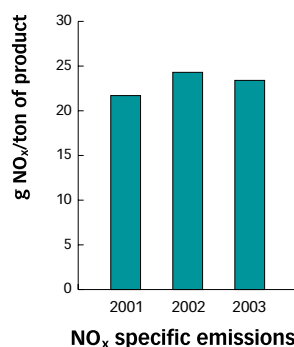
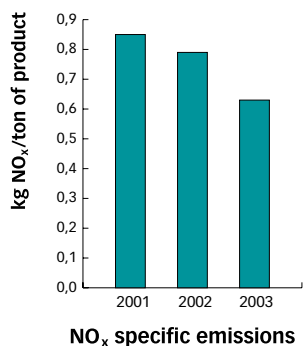
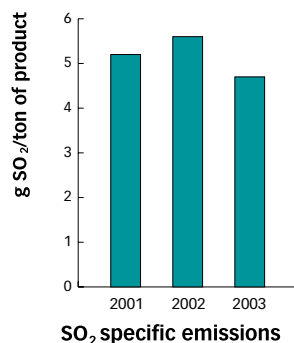
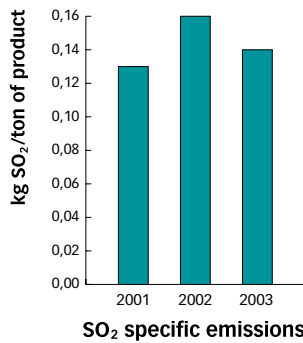
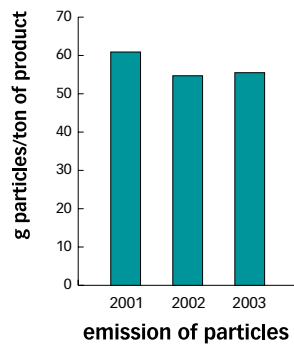
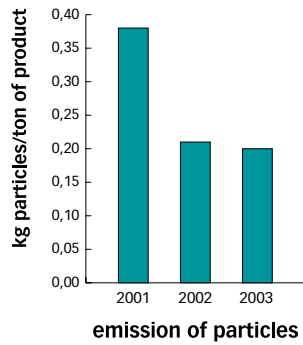
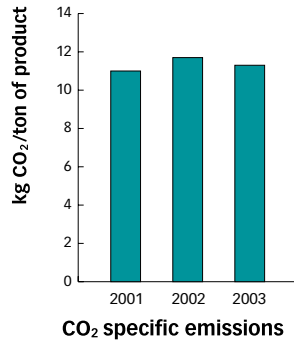


Specific Emissions in Air

Quick lime



Carbonate products



The diagrams are based partly on measurements, partly on calculations. They concern operations in Finland and Sweden.

Environmental Impact

Most of Nordkalk's production plants are situated in towns and built-up areas, which means that the surroundings place great demands on operations. Nordkalk extracts and refines limestone at 28 locations in Finland, Sweden, Estonia and Poland.

The most disturbing aspects of Nordkalk's operations are noise, vibration and dust. Other disadvantages in conjunction with extraction include surplus stone and various waste materials from the production processes.

Production processes

Limestone is extracted from the bedrock in either quarries or underground mines. The rock is transported for rough handling and sorting, after which it goes on to be processed further elsewhere. These operations give rise to vibration, noise and dust. Quarrying results in very obvious changes in the landscape. In addition to the stone that is actually used by Nordkalk, considerable amounts of surplus stone are also produced. To some extent this can be crushed and used as macadam but some of it has to be stored in the vicinity of the quarry. Ground water seeps by way of cracks in the bedrock into the mines, and surface water collects in the quarries. This may affect the level of the ground water in the area.

Quick lime is produced by heating crushed and sorted limestone to a temperature of some 1000°C in either a rotary or shaft kiln. The limestone (CaCO₃) breaks down into calcium oxide or quick lime (CaO) and carbon dioxide (CO₂). Coal, oil or gas may be used to fuel the process. Quick lime is grainy or floury in appearance. It is sieved into different fractions or ground to a fine flour. Flue gases contain, among others, oxides of nitrogen (NO_x), carbon dioxide (CO₂) and varying amounts of sulphur dioxide (SO₂). The manufacturing process also releases dust into the air, and to reduce this, the emissions are passed through an electric or textile filter. The filter has to be extremely sensitive. Lime-burning does not lead to the release of effluents into watercourses.

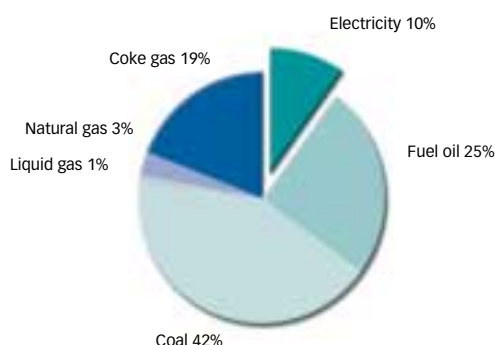
The products are used in the manufacture of iron and steel, for processing sulphite ores, for pulp and paper making and cleaning water, etc. Quick lime is also used in coal-fired power plants for cleaning flue gases.

Slaked or hydrated lime is made by adding water to quick lime. The calcium oxide reacts with the water to produce calcium hydroxide (Ca(OH)₂). The slaked lime is a dry, powder-like flour light in colour. The process of slaking lime releases heat and steam. Efficient dust removal, however, means that the quantity of particles discharged into the atmosphere is negligible.

Slaked lime is used in municipal and industrial water purification plants, for cleaning flue gases and as a raw material in the building material industry.

All Nordkalk's production plants have development projects in progress, and routines for monitoring and supervising are being improved all the time. The most

Sources of energy



Carbonate products consist of crushed, ground and sieved limestone, i.e. calcium carbonate (CaCO_3). The grinding of the limestone is a dry process so that dust formation is the major disadvantage in plants where this is done. The dust emissions are kept to a minimum by efficient filters.

The different uses for these products include soil improvement, cleaning flue gases at coal-fired power plants and raising the alkaline level in water. It is also commonly used in animal feeds and as a filler in asphalt, paper and plastics.

Nordkalk **refines calcite and wollastonite** from the raw stone extracted from the mine at Lappeenranta. The processed calcite is then further refined to make paper pigments. In the refining process the water used is in a closed system. If necessary, water can be discharged under controlled conditions into a nearby ditch to which diverts also water from the local water treatment plant.

Energy consumption

The process of crushing, grinding and sieving carbonate products consumes electricity. Moreover, liquid gas or fuel oil is used for drying carbonate products. The specific consumption of energy in 2003 was 0.26 GJ per produced ton of carbonate product. Energy analyses have identified potential ways of saving energy in the manufacture of carbonate products. These include, for example, changing the air intakes for the drums used to dry the products and reducing the temperature at certain stages of the process. Daily maintenance routines and careful regulation can also affect the consumption of energy, of course.

The process of burning lime requires high temperatures. Calcination of the limestone takes place in the kilns at a temperature of about 1000°C. The heat comes from coal, fuel oil or coke gas. Coke gas is a by-product from the steel industry and can be used as a fuel in the lime kilns if they are situated in the immediate vicinity of a steel factory. Using other fuels to replace coal and oil in the lime industry poses a problem. The impurities in the fuels permeate the lime products, the purity demands for which are extremely strict. Moreover, the thermal values for most renewable fuels are in general low so that the quantities of fuel required increase and necessitate major changes in the processes. The specific

energy used in the production of quick lime has dropped since the end of the 1990's and in 2003 it was 5.6 GJ per ton of lime.

Nordkalk's emissions of carbon dioxide derive from its consumption of energy but carbon dioxide is also released into the atmosphere during the actual process of making quick lime. Carbon dioxide is released from calcium carbonate under the influence of heat and the final product is calcium oxide, quick lime. Theoretical calculations indicate that about 33 per cent of the carbon dioxide produced by Nordkalk comes from the fuel used and about 66 per cent from the calcination process. Quick lime is an irreplaceable raw material for both environmental and industrial purposes. In some of the processes employed by Nordkalk's customers, such as the manufacture of PCC used for paper pigments, the carbon dioxide released when the lime is burnt is reintroduced into the product when recarbonisation occurs.

Energy-saving agreement

Nordkalk's three main plants in Finland - at Lappeenranta, Pargas and Tytyri, Lohja - joined the Ministry of Trade and Industry's voluntary agreement on energy saving in the year 2000. At those locations where the energy-saving agreement is not in force, efforts are nonetheless made to follow the same norms and reduce consumption of energy. At Lappeenranta, Pargas and Tytyri, authorised energy inspection consultants carried out the analyses of how energy might be saved in both production processes and construction technology. As a result of the analysis each location drew up a plan for more efficient energy-saving measures in which attention focuses on operating methods that affect energy consumption. An example of the most important measures that have been put into practice to save energy is the way in which waste heat from the lime kilns is recovered. This heat is then fed into the local district heating system or used in Nordkalk's own production. In 2003 in Sweden Nordkalk started to build an Energy Management system designed to save energy. It will examine the energy efficiency of the different production plants and possible ways of saving energy.

Emissions trading

Last summer the European Union approved a directive concerning trading in emissions of greenhouse gases; trading will start at the beginning of 2005. During the first stage, the years 2005-2007, trading will be restricted to carbon dioxide emissions and the EU region. After 2008, however, other greenhouse gases may be included in the system.

The EU has promised to reduce its emissions of greenhouse gases by eight per cent from the 1990 level. Within the EU system Finland has committed itself not to let its emissions rise above the 1990 level, and Sweden decided to reduce its emissions by four per cent.

Nordkalk's lime plants in Finland and Sweden have provided the authorities with preliminary data about their carbon dioxide emissions. A binding application for an emissions permit will become relevant in the spring when the trading directive has been passed into national legislation. Emissions trading is also planned in Estonia in the same way when it joins the European Union but for the present it follows its own programme.

Environmental Products

Nordkalk also develops and markets products for environmental care. Different kinds of limestone-based applications can be used to prevent and remedy environmental problems. Sales of environmental products accounted for 13 per cent of Nordkalk's total turnover in 2003. A significant part of this is used to clean drinking and waste water.

Nordkalk Velox has been evolved with the specific purpose of finding more efficient ways of composting and combating the unpleasant odours often associated with waste and water purification plants. Nordkalk Velox is particularly well suited for use at composting plants and open-pit composts that handle bio-waste and different wastewater and industrial sludges. In 2003 Nordkalk Velox was a key factor in helping the town of Kotka to combat the unpleasant smells from its composting aggregate.

Nordkalk Filtra is a new range of products that has been brought out to filter wastewater. Different kinds of limestone filters make it possible to clean water in situations where traditional methods are unsuitable. The products are best suited for use in small units that are not served by the communal wastewater system. The Nordkalk Filtra range of products is extremely timely since a law that came into force at the beginning of the year places a duty on private householders in rural areas to clean their wastewater.

The acidification of watercourses comes primarily from air pollution in the form of acid rain. Liming helps to

return the quality of the water to what it was before acidification. Nordkalk's long-term work stretching over several decades has won the company worldwide renown as an expert on liming lakes and watercourses. Sweden has the world's largest state-funded liming programme in the world. Nordkalk participates actively in this programme in its capacity as an expert on the liming of watercourses and forests.

The production of energy leads to air pollution through acid emissions, which in turn can lead to acid rain, for example. Both quick lime (Nordkalk QL products) and slaked lime (Nordkalk SL products) are used to remove sulphur from power-plant flue gases and so reduce pollution.

The sulphur dioxide (SO₂) in flue gases from coal-fired power plants can be reduced by means of limestone powder in wet scrubbers or by semi-dry technology using quick lime. Both methods can reduce the amount of sulphur dioxide by more than 90 per cent.

When waste is incinerated, emissions of chlorine and fluorine (HCl, HF) exceed those of sulphur. Limestone-based products can be used to reduce these, too. In some plants the flue gases are scrubbed with water and the resulting acid water neutralised by means of limestone powder and slaked lime. Slaked lime can also be injected into the flue-gas duct of the plant before particle separation. The incineration of waste is very common in Sweden and Central Europe, for example.



Environmental Measures 2003

important aims of Nordkalk's environmental measures are to reduce dust emissions and noise and to make more efficient use of limited resources, such as stone and fuels. Our environmental management system has led to many improvements. Safer handling of waste oil and more efficient sorting of general waste may be mentioned as examples. Ways of using surplus stone form part of the environmental programmes for the mines and quarries.

In 2003 Nordkalk spent a total of 2.7 million on investment designed to reduce the adverse environmental impact of its operations. Nordkalk makes no demands on a return from this investment.

Reducing dust emissions is one of the most important environmental measures in Nordkalk's operations, and efforts to cut the amounts of dust released are being continuously improved. By scattered dust emissions is meant that extremely fine particles are spread over the environment with the wind principally from loading bays and the wheels of vehicles. By improving traffic arrangements at Nordkalk's different industrial sites the amount of dust released can be reduced and traffic safety improved. Many of Nordkalk's plants have purchased sweeping machines, covered their yards with asphalt, increased wetting, built sound barriers and planted trees. As far as possible water from the company's own mines or quarries is used for wetting dusty areas and roads. The effects of the measures taken are monitored, and the majority of the plants measure the dust emission and fall-out at their location regularly. The measurements taken at Sipoo, for example, show that the amount of dust in the air at the plant has been reduced to a quarter of what it was in the early 1980's.

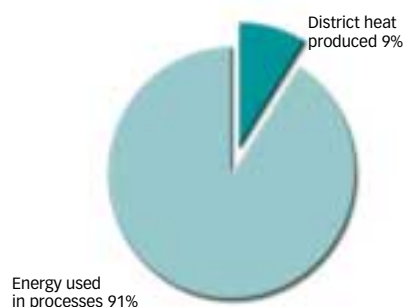
Nordkalk's lime kilns, crushing and grinding plants and loading bays have been equipped in recent years with new electric and textile filters that efficiently cut the amounts of particles released. In 2003 a new electric filter was installed at the Köping plant in Sweden. The textile filters on the grinding lines at Vampula and Vimpeli in Finland have been changed. These measures have considerably reduced emissions of particles in the vicinity of the production plants.

At Storugns on Gotland and KPAB (Kalkproduktion Storugns AB) an international R&D project financed by the EU to reduce the amount of fine particles and dust was completed. An evaluation of the results is at present in progress and this is expected to be finished by summer 2004.

Nordkalk's plants make continuous improvements to **cut the noise** from machines and equipment. Another important consideration is to up-date work routines so that exposure of both workers and the environment to noise can be reduced. Measurements of noise levels in recent years have shown that they have risen markedly. The project to reduce noise at the Storugns port will continue in 2004.

The state of both **ground and surface water** is subject to continuous monitoring. Analyses carried out at Lappeenranta, for example, indicate that the water released into watercourses from the industrial site consists mainly of rainwater and is of good quality. Nordkalk also monitors the state of ground water; there are some twenty measuring points within the Lappeenranta industrial site. The measurements show that the water is of good quality. The level of the ground water has not dropped even though quarrying continues at increasingly lower levels.

Heat recovery from flue gases from the kilns in Finland



In Poland Miedzanka supplies water to nearby domestic households, and the Tytyri plant in Finland provides the local waterworks with ground water.

District heating supplies on the increase

Efforts to **recover waste heat** from the lime kilns continued in 2003. Pargas invested in equipment to increase the plant's capacity to recover waste heat and the amount of energy supplied to the town's district heating system rose by 34.2 per cent compared with the figure before the technical innovations. Nordkalk now produces some 60 per cent of the district heating in Pargas. Tytyri plant supplies the Lohja district heating network with surplus heat from both the rotary and shaft kilns. The amount of heat supplied from Tytyri rose in 2003 by about 20 per cent compared with the year 2002. Corresponding amounts of heat at both Pargas and Lohja were previously produced by means of fuel oil. This added to the greenhouse effect because of the carbon dioxide released into the atmosphere. This investment was made mainly in 2002 but the increase in the amount of heat supplied to the district heating system is reflected in production figures for 2003. Waste heat from the lime kiln at Lappeenranta is also distributed in the form of district heating or exploited in the plants' own production processes, as is done at the Louhi plant, too.

Improvements in internal logistics have led to important savings in fuel, especially at Uddagården and Luleå in Sweden. The logistics programme is being developed further on the basis of the results from the earlier project. Transport trips (tons/km) at Luleå have fallen by about 8.6 per cent. Reducing the number of loads has also meant reduced emissions of dust.

One aim of the environmental programmes at the mines is to cut the quantity of surplus stone that has to be stored and to find ways of exploiting it usefully. In Finland **the exploitation of surplus stone** was over 60 per cent in 2003.

Sales of dust recovered from the electric filters

installed in the lime kilns at Pargas, Lappeenranta, Tytyri and Louhi continue, and the plant at Köping in Sweden succeeded once again in making use of the entire amount of filter dust recovered.

Nordkalk has put great effort into methods of **storing surplus products in mining space** that is no longer in use. This cuts dust considerably and the storage areas above ground do not have to be extended. According to the local environmental centre, the underground mining space no longer required at Louhi and Tytyri constitutes an important final dump for fly ash and the end-product of desulphurisation from power stations. The Tytyri plant succeeded in storing a record amount of final products from power plants in 2003. The quantity amounted to 45.5 per cent more than the previous year.

At many sites the areas close to the quarries where surplus stone is stored have been landscaped by planting trees. Landscaping at Storugns on Gotland is regarded as a part of the production process and is carried out as quarrying advances.

Lappeenranta continues its programme of **landscaping** the old rubbish tip for industrial waste. The work was begun in 2000 in accordance with the terms of its environmental permit. A total of 28 200 trees - pines, firs and birches - have now been planted, 12 200 last year. A nearby ditch has been cleaned and an area belonging to the town of Lappeenranta fenced in.

Waste handling has been intensified. For example, at Tytyri the amount of unsorted waste has been reduced by 38 per cent in the last three years. In the summer of 2003 sorting of hazardous waste was begun in Estonia. Cleaning of the industrial areas is continuously improved.

Unexpected incidents affecting the environment

Last year one "near miss" incident was reported at Nordkalk. Unchecked this might have led to oil seeping into the ground from old oil cisterns. Nordkalk has now tightened up the control of old oil cisterns.

Information improved

Nordkalk has opened environmental pages on its own intranet and a special server for decisions, reports and plans involving environmental matters. In this way Nordkalk hopes to heighten the personnel's awareness of environmental considerations and responsibility for the environment at the same time as strengthening their commitment to environmental work.

Appreciation of the importance of environmental work has increased in Estonia. At the end of the year an external environmental audit was organised as a first step towards setting up an environmental system.

Lappeenranta updated its local environmental report. It describes the state of the environment throughout the whole industrial site, where several other companies operate as well as Nordkalk.

Environmental achievement of the year 2003

Nordkalk's internal award of merit for environmental achievement for 2003 was given this time to the team led by Sylve Snäckerström for its work on installing the new electric filter for the lime kiln at Köping in Sweden. The new filter means that the number of particles in the

flue gases has fallen markedly below the permitted level of 50 mg/m³. During past months, figures for emissions from the Köping lime kiln have been 5-7 mg/m³.



Emissions and By-Products

FINLAND		2001	2002	2003
emission in air:	CO ₂ (t)	658,396	696,725	677,084
	particles (t)	453	207	200
	SO ₂ (t)	90	75	101
	NO _x (t)	444	502	381
emission in water 1)	solid material (t)	51	5	19
	BOD ₅ ATU (t)	5	1	1
by-product:	filter dust (t)	45,195	52,530	53,409
	* utilized (t)	29,632	37,624	29,551
	slaking residue (t)	19,191	16,028	14,081
	* utilized (t)	6,605	9,372	10,968
	surplus stone (t)	1,328,901	1,782,470	2,253,181
	* utilized (t)	1,005,718	1,304,445	1,533,212
	refining waste (t)	115,637	183,264	199,975
	* utilized (t)	65,746	39,446	31,500
	kiln waste (t)	12,299	11,526	11,496
	* utilized (t)	410	538	987
	* mine filling (t)	600	470	9,107
environmentally hazardous waste: oils+greases (t)	50	58	42	
SWEDEN		2001	2002	2003
emission in air:	CO ₂ (t)	385,733	415,109	459,763
	particles (t)	37	116	113
	SO ₂ (t)	38	50	47
	NO _x (t)	389	306	290
by-product:	filter dust (t)	30,980	37,607	27,727
	* utilized (t)	29,638	36,012	25,917
	slaking residue (t)	1,600	1,716	1,319
	* utilized (t)	593	1,716	1,319
	surplus stone (t) 2)	33,759	669,407	1,036,638
	* utilized (t)	25,759	329,936	377,453
	washing sludge (t)	26,000	26,000	26,000
	kiln waste (t)	3,100	1,994	1,526
* utilized (t)	0	0	0	
environmentally hazardous waste: oils+greases (m ³) 3)	750	444	506	
ESTONIA		2001	2002	2003
emission in air:	CO ₂ (t)	25,303	34,583	38,295
	particles (t)	20	182	321
	SO ₂ (t)	2	2	2
	NO _x (t)	19	17	29
by-product:	filter dust (t)	240	2,999	2,100
	* utilized (t)	240	2,999	2,100
	kiln waste (t)	200	557	850
	surplus stone (t)	31,179	61,597	0
	* utilized (t)	0	0	0
environmentally hazardous waste: oils+greases (m ³)	5	4	6	
POLAND		2001	2002	2003
emission in air:	CO ₂ (t)	9,264	7,993	9,082
	particles (t)	19	12	22
	SO ₂ (t)	6	6	8
	NO _x (t)	24	20	23
by-product:	process waste (t)	0	0	0
	surplus stone (t)	331,944	333,623	0
	* utilized (t)	293,625	333,623	225,147
environmentally hazardous waste: oils+greases (t)	21	19	23	

The tables are a summary of measured and calculated figures.

1) Lappeenranta, Ihalainen industrial area

2) Monitoring of surplus stone has been changed.

3) As a consequence of a change in law, Storugns must be ready to accept waste oil from the ships visiting the harbour.



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* In addition, there are flotation plants for calcite and wollastonite and a factory service in Lappeenranta. Nordkalk's subsidiary Suomen Karbonaatti Oy is located in Lappeenranta.

** Nordkalk holds 60% of Inkoo Shipping.

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