

Norske Skog *plus*

First half 1998

Satisfactory printing paper market



Strategic alliance in Asia

Golbey PM 2 on schedule

Successful upgrade at Halden



Focus on health, environment and safety

Norske Skog is an international forest industry group with companies in Norway, France, Austria and the Czech Republic. In its largest product area, printing paper, the Group is one of the world's leading suppliers. Norske Skog has about 6,000 employees and 18,000 shareholders; in 1997 its operating income was NOK 13.3 billion.

Results and sales

Norske Skog's operating revenues in first half 1998 reached NOK 6,955 million, while the comparable figure for the first six months of last year was NOK 6,137 million. A stable, satisfactory market for printing paper contributed to an operating profit of NOK 867 million - twice as much as in the same period last year (NOK 428 million). The market for pulp is weak. The same applies, to some extent, to the market for building products.

Pre-tax profit reached NOK 914 million (NOK 61 million). Net financial items during the second quarter showed a positive result. Net cash flow from operations in January-June was NOK 1,218 million (NOK 652 million). Earnings per share - after deduction for tax costs - rose during the first half-year to NOK 17.09 (NOK 1.33).

The Group's tax costs as of 30.06. are calculated at NOK 261 million - 28.6% of the pre-tax profit.

Total financial items during the first half-year showed a net result of minus NOK 39 million. This figure was considerably affected by the fact that the leasing agreements covering Norske Skog Saugbrugs' PM 5 and PM 6 provided Norske Skog with a one-off payment of NOK 241 million, all of which was booked as income during the second quarter. Net interest income as of 30.06. amounted to minus NOK 97 million (minus NOK 137 million). Excluding the one-off payment, total net financial items amounted to minus NOK 280 million (minus NOK 380 million). The weaker Norwegian krone during the period boosted financial costs, owing to currency hedging, by NOK 168 million - a figure which was more than offset by higher operating revenue resulting from exchange rate movements.

Investments and finance

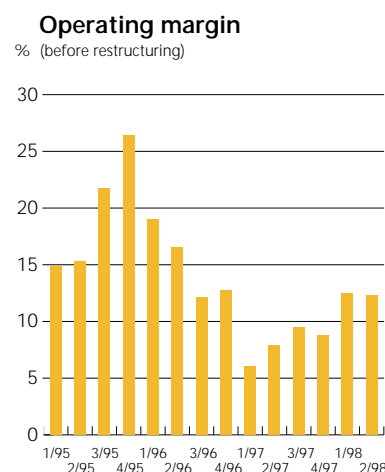
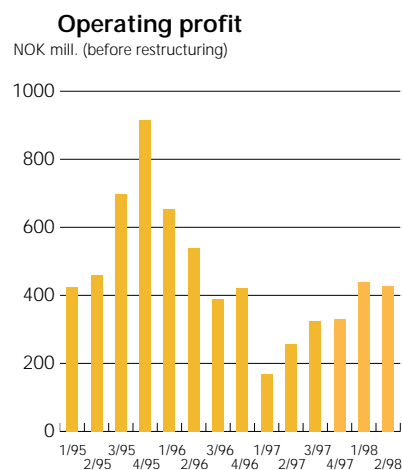
Norske Skog's investments in plant and machinery totalled NOK 2,311 million during the first half-year. Of this, NOK 1,528 million related to Norske Skog Golbey's PM 2 project. Total investments in this project had reached NOK 2,253 million by 30.06, and it is being implemented on schedule and within budget.

Norske Skog Saugbrugs' PM 5 was started up, as scheduled, on 29.04, following a 10-week shutdown for a comprehensive rebuild. As a result of the rebuild, the machine can now produce SC A-grade magazine paper, while production costs have fallen, the working environment has improved, and capacity has been marginally increased.

As stated in our report for the first quarter, Norske Skog concluded a financial leasing agreement with US counterparts covering Norske Skog Saugbrugs' PM 5 and 6. The net effect of the one-off payment to Norske Skog was NOK 174 million after tax. This increases the Group's equity to assets ratio by 0.9 percentage points.

The Group's equity capital as of 30.06. was NOK 9,717 million, or NOK 254 per share. The equity to assets ratio stood at 47.3 %, compared with 52.4 % at the end of 1997.

Norske Skog's net interest-bearing debt amounted to NOK 4,838 million as of 30.06.1998, while the corresponding figure as of end-1997 was NOK 4,145 million. The increase reflects drawings on existing borrowing facilities to finance Norske Skog Golbey's PM 2.



PROFIT AND LOSS ACCOUNT

| <i>NOK million</i> | April-June 98 | April- June 97 | January-June 98 | January- June 97 | 1997 |
|---|---------------|----------------|-----------------|------------------|--------------|
| Operating revenue | 3,475 | 3,281 | 6,955 | 6,137 | 13,312 |
| Operating expenses | - 2,744 | - 2,746 | - 5,487 | - 5,158 | - 11,089 |
| Ordinary depreciation | - 303 | - 277 | - 601 | - 551 | - 1,140 |
| Operating profit | 428 | 258 | 867 | 428 | 1,083 |
| Share of profit in affiliated companies | 11 | 3 | 23 | 13 | 22 |
| Financial revenue/financial expenses | 69 | - 318 | - 39 | - 380 | - 455 |
| Profit before minority interests and taxes | 508 | - 57 | 851 | 61 | 650 |
| Minority interests | 1 | 0 | 1 | 0 | 2 |
| Profit before extraordinary items | 509 | - 57 | 852 | 61 | 652 |
| Extraordinary items | 0 | 0 | 62 | 0 | 0 |
| Profit before taxes | 509 | - 57 | 914 | 61 | 652 |
| Taxes | - 136 | 16 | - 261 | - 17 | - 62 |
| Net profit | 373 | - 41 | 653 | 44 | 590 |
| Earnings per share | 9.76 | - 1.24 | 17.09 | 1.33 | 16.40 |
| Earnings per share fully diluted | 9.76 | - 1.24 | 17.09 | 1.33 | 16.40 |

Quarterly comparison

| <i>NOK million</i> | 2nd Q 98 | 1st Q 98 | 4th Q 97 | 3rd Q 97 | 2nd Q 97 | 1st Q 97 | 4th Q 96 | 3rd Q 96 | 2nd Q 96 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Operating revenue | 3,475 | 3,480 | 3,744 | 3,431 | 3,281 | 2,856 | 3,327 | 3,216 | 3,274 |
| Operating profit | 428 | 439 | 330 | 325 | 258 | 170 | 434 | 289 | 539 |
| Profit before minority interests and taxes | 508 | 343 | 323 | 266 | - 57 | 118 | 405 | 281 | 441 |
| Net profit | 373 | 280 | 354 | 192 | - 41 | 85 | 362 | 195 | 331 |

STATEMENT OF CASH FLOW

| <i>NOK million</i> | January-June 98 | January-June 97 | 1997 |
|---|------------------------|------------------------|----------------|
| Cash flow from operating activities | January-June 98 | January-June 97 | 1997 |
| Cash generated from operations | 6,551 | 6,136 | 13,169 |
| Cash used in operations | - 5,375 | - 5,102 | - 10,920 |
| Financial revenue received | 272 | 62 | 130 |
| Financial expenses paid | - 178 | - 261 | - 454 |
| Taxes paid | - 52 | - 183 | - 310 |
| Net cash flow from operating activities | 1,218 | 652 | 1,615 |
| Cash flow from investment activities | | | |
| Investments in operational fixed assets | - 2,311 | - 480 | - 1,814 |
| Adjustment for investment with deferred cash-effect | 652 | - | 219 |
| Sales of operational fixed assets | 8 | 37 | 44 |
| Net financial investments | - 39 | 0 | - 70 |
| Net cash flow from invest | - 1,690 | - 443 | - 1,621 |
| Cash flow from financial activities | | | |
| Net change in long-term debt | 2,046 | 71 | - 1,606 |
| Net change in short-term liabilities | - 524 | - 136 | 485 |
| Dividend paid | - 259 | - 220 | - 228 |
| New equity (share issues and converted bonds) | 0 | 97 | 1,106 |
| Net cash flow from financial activities | 1,263 | - 188 | - 243 |
| Total change in liquid assets | 791 | 21 | - 249 |

BALANCE SHEET

| <i>NOK million</i> | 30.06.98 | <i>30.06.97</i> | <i>31.12.97</i> |
|---|-----------------|-----------------|-----------------|
| Liquid assets | 1,644 | 1,115 | 853 |
| Receivables | 2,551 | 2,022 | 2,155 |
| Stocks | 1,734 | 1,741 | 1,507 |
| Current assets | 5,929 | 4,878 | 4,515 |
| Securities and long-term fin. assets | 791 | 733 | 699 |
| Operational fixed assets | 13,806 | 11,123 | 12,079 |
| Fixed assets | 14,597 | 11,856 | 12,778 |
| Total assets | 20,526 | 16,734 | 17,293 |
| | | | |
| Current liabilities | 3,627 | 2,707 | 3,223 |
| Long-term debt | 6,753 | 5,065 | 4,597 |
| Subordinated convertible bonds | 0 | 707 | 0 |
| Deferred taxes | 372 | 420 | 350 |
| Minority interests | 57 | 61 | 59 |
| Shareholders' equity | 9,717 | 7,774 | 9,064 |
| Total liab. and shareholders' equity | 20,526 | 16,734 | 17,293 |

FINANCIAL KEY FIGURES

| | <i>Definitions</i> | January- June 98 | <i>January- June 97</i> | <i>1997</i> |
|---------------------------------------|--------------------|-----------------------------|-----------------------------|-------------|
| Operating margin % | 1 | 12.5 | 7.0 | 8.1 |
| Equity ratio % | 2 | 47.3 | 46.5 | 52.4 |
| Current ratio | 3 | 1.63 | 1.37 | 1.40 |
| Net debt/Equity | | 0.50 | 0.63 | 0.46 |
| Earnings per share after taxes | 4 | 17.09 | 1.33 | 16.40 |
| Earnings per share - fully diluted*) | | 17.09 | 1.33 | 16.40 |
| Cash flow per share after taxes | 5 | 31.88 | 19.68 | 44.89 |
| Cash flow per share - fully diluted*) | | 31.88 | 17.69 | 44.89 |

Definitions:

- 1 : Operating margin = Operating profit : Operating revenue
- 2 : Equity ratio = Equity : Total assets
- 3 : Current ratio = Current assets : Current liabilities
- 4 : Earnings per share = Profit for the year : Average number of shares
- 5 : Cash flow per share = Cash flow from operating activities : Average number of shares

*) Profit for the year and cash flow are rectified by interest expenses on subordinated convertible bonds

Structural developments

During the first week of July, Norske Skog concluded a letter of intent with Abitibi Consolidated, Canada, and Hansol Paper Co., Korea, to form a company which will have a leading position in newsprint and other printing paper in Asia. Each of the three companies will own a third of the new firm, which will include both production and sales which the three have in the region.

The company will own 100% of Hansol's newsprint mill at Chonju, Korea, with a capacity of about 1 million tonnes/year, plus Hansol's 53% ownership stake in Shanghai Hansol Potential Co., a newsprint mill in China with capacity of 125,000 tonnes. Norske Skog is in the final phase of taking over Shinho's newsprint mills in Korea and Thailand, with total capacity of 300,000 tonnes, and these mills will be transferred to the new company.

Together, these four mills will have a capacity of around 1.4 million tonnes. This represents an 18% market share in the Asia-Pacific area, and a 40% market share in Asia, excluding Japan. In newsprint, the new company will be the largest in Asia, excluding Japan. The joint venture will own efficient, highly modern facilities in a region which can look forward to good market growth over the longer term. The average age of the newsprint machines is only five years.

The value of the new company has been estimated at around NOK 11 billion. The intention is that 40% of financing should come from equity capital and the rest from borrowing without guarantees by the owners.

The agreement is subject to the usual conditions, such as financing arrangements, and the approval of the national authorities and the boards of the three companies. It is intended to complete negotiation of the agreement during autumn 1998.

Efforts are still being made to find new owners for Norske Skog Hurum, Norske Skog Flooring AS and Fibo-Trespo AS. These three businesses produce, respectively, special paper, flooring products and laminated components, and their further development can best be fostered by owners having a commercial focus on these products.

Forestia AS has decided that Forestia Langmoen should wind up production of sawn timber and concentrate on further processing, while Forestia Romedal should shut down its planing plant and concentrate on the efficient production of sawn timber. Saugbrugs Trelast, a trading company, was transferred to new owners with effect from 22.06.1998.

Newsprint

The level of economic activity in western industrial countries has benefitted the printed media through increased advertising revenues, more pages and higher circulation figures. Lower demand for newsprint from Asian markets has been offset by higher consumption in western Europe and north America.

Total newsprint deliveries to western Europe were 7% higher during the first half-year than in the same period of 1997. Production at Norske Skog's mills has been high.

After the price increase during the first quarter, prices have been virtually unchanged.

Magazine paper

The markets for SC magazine paper have - apart from the Far East - shown a positive trend. Total deliveries to western Europe, by the end of the half year, were 9% higher than at the same time in 1997. Prices have been stable, following an increase at the beginning of the year. In the US, prices were increased somewhat with effect from 01.07.

For LWC magazine paper, too, demand and order inflow was good. Towards the end of the half-year period, however, activity weakened slightly. Prices have been stable, even though low prices for coated fine paper exerted some pressure on coated magazine paper, too.

Fibre

Demand for pulp from the main west European markets stagnated during the first half-year. Production cutbacks led to some reduction in manufacturers' stocks, but during June NORSCAN stocks rose again, so that by the end of the second quarter they stood at 1.5 million tonnes - the same as at the end of the first quarter. Continued curbs on production will be needed, to limit stock building. The price of bleached long fibre sulphate pulp was USD 550/tonne during the first half-year, but it has since fallen to USD 530/tonne.

Forestia AS

Demand on the main markets for sawn timber has been satisfactory, but the situation is still affected by high production, which has created a buyer's market. Forestia AS improved its operating result during the second quarter, but results were still affected by low export prices for sawn timber, together with continued efforts to improve operations at the new particle board line at Braskereidfoss.

Norske Skog Flooring AS

The market for laminated flooring continues to grow in both Europe and the US, particularly within the low-price segment. In these markets demand for parquet flooring also continues good, but competition has become keener owing to capacity growth and increased imports from south-east Asia. Prices of parquet and laminated flooring are consequently under pressure. A comprehensive action plan has been launched which aims, initially, to strengthen sales and reduce costs.

Resources

Supplies of raw material to the Group's Norwegian pulp and paper mills are going according to plan. Imports account for around 40% of the total.

The industry's Living Forests project has been concluded. There now exist uniform standards for sustainable forestry in Norway, and a basis for certification. Norske Skog will utilise the results of the project both in its own forests and in buying timber.

Norske Skog is starting negotiations with Norwegian local authorities concerning supplies of waste paper for the recycling plant at Norske Skog Skogn. The Group aims to conclude long-term agreements which will provide security both to the local authorities and to Norske Skog, at prices which will make the recycling plant profitable.

In June, Norske Skog and Statkraft concluded a framework agreement concerning long-term power deliveries. The agreement will meet the greater part of Norske Skog's electricity requirements, for its present activities in Norway, up to and including 2020. Deliveries under the agreement will start in 2002, and will be stepped up gradually, as the Group's present agreements expire, to reach a total of 4 TWh/year, with full offtake, from 2011. The agreement gives Norske Skog one of the main prerequisites for the profitable operation of its paper and pulp activities in Norway, over the longer run. Work on the Skogn cogen plant project continues, through Industrikraft Midt-Norge.

Health, safety and the environment

An employee at Norske Skog Saugbrugs lost his life in a tragic accident at work on 28.06.

Since the end of last year, Norske Skog has defined new, more ambitious criteria for its goals in the area of Health, Environment and Safety (HES). This has already significantly increased the attention, priority and effort being devoted to this area, but still more needs to be done at all levels of our organisation. The HES upgrade drive has not so far led to any noticeable improvement in accident figures.

The year 2000

With the specialist and organisational support of the Group's IT function and Norske Skog Research, all units are implementing comprehensive programmes aimed at adapting their administrative and operative computer systems to the millennium shift.

Future prospects

Favourable market conditions for the Group's printing paper products in western Europe and north America have so far offset the direct effects of the weak economic trend in Asia. Demand for printing paper is expected to remain satisfactory for the rest of the year. The present level of pulp prices does not provide satisfactory profits for producers, but the imbalance between capacity and consumption makes it difficult to increase prices.

For the year as a whole, Norske Skog expects to achieve a significantly better result than in 1997.

Lysaker, August 19 1998

The Board of Norske Skogindustrier ASA

Revenue and profit per area

OPERATING REVENUE

| <i>NOK million</i> | April-June 98 | <i>April- June 97</i> | January-June 98 | <i>January- June 97</i> | <i>1997</i> |
|--------------------------------------|----------------------|-----------------------|------------------------|-------------------------|-------------|
| Newsprint | 1,545 | 1,386 | 3,061 | 2,498 | 5,672 |
| Magazine paper | 923 | 845 | 1,908 | 1,678 | 3,612 |
| Fibre | 375 | 365 | 751 | 658 | 1,376 |
| Forestia | 510 | 497 | 969 | 918 | 1,964 |
| Flooring | 156 | 182 | 322 | 332 | 703 |
| Total areas | 3,509 | 3,275 | 7,011 | 6,084 | 13,327 |
| Eliminations/administrative expenses | - 34 | 6 | - 56 | 53 | -15 |
| Total consolidated | 3,475 | 3,281 | 6,955 | 6,137 | 13,312 |

OPERATING PROFIT

| <i>NOK million</i> | April-June 98 | <i>April- June 97</i> | January-June 98 | <i>January- June 97</i> | <i>1997</i> |
|--------------------------------------|----------------------|-----------------------|------------------------|-------------------------|-------------|
| Newsprint | 288 | 157 | 593 | 280 | 761 |
| Magazine paper | 147 | 67 | 302 | 142 | 373 |
| Fibre | 34 | 14 | 51 | - 13 | 49 |
| Forestia | 11 | 16 | 4 | 16 | 19 |
| Flooring | - 13 | - 5 | - 28 | - 10 | - 35 |
| Total areas | 467 | 249 | 921 | 415 | 1,167 |
| Eliminations/administrative expenses | - 39 | 9 | - 54 | 13 | - 84 |
| Total consolidated | 428 | 258 | 867 | 428 | 1,083 |

QUARTERLY COMPARISON

| <i>NOK million</i> | 2nd Q 98 | <i>1st Q 98</i> | <i>4th Q 97</i> | <i>3rd Q 97</i> | <i>2nd Q 97</i> | <i>1st Q 97</i> | <i>4th Q 96</i> | <i>3rd Q 96</i> | <i>2nd Q 96</i> |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Operating revenue | | | | | | | | | |
| Newsprint | 1,545 | 1,516 | 1,727 | 1,447 | 1,386 | 1,112 | 1,245 | 1,256 | 1,494 |
| Magazine paper | 923 | 985 | 956 | 978 | 845 | 833 | 969 | 1,028 | 968 |
| Fibre | 375 | 376 | 370 | 348 | 365 | 293 | 311 | 323 | 246 |
| Forestia | 510 | 459 | 512 | 534 | 497 | 421 | 688 | 481 | 422 |
| Flooring | 156 | 166 | 222 | 149 | 182 | 150 | 156 | 145 | 130 |
| Operating profit | | | | | | | | | |
| Newsprint | 288 | 305 | 239 | 242 | 157 | 123 | 306 | 212 | 400 |
| Magazine paper | 147 | 155 | 126 | 105 | 67 | 75 | 119 | 179 | 172 |
| Fibre | 34 | 17 | 60 | 2 | 14 | - 27 | - 22 | - 20 | - 40 |
| Forestia | 11 | - 7 | - 13 | 16 | 16 | 0 | - 5 | 0 | 6 |
| Flooring | - 13 | - 15 | - 16 | - 9 | - 5 | - 5 | 19 | 10 | - 2 |

Production per area

PRODUCTION

| <i>NOK million</i> | <i>1,000</i> | April-June 98 | <i>April- June 97</i> | January-June 98 | <i>January- June 97</i> | <i>1997</i> |
|----------------------------------|----------------|----------------------|-----------------------|------------------------|-------------------------|-------------|
| Newsprint | | | | | | |
| Newsprint ¹⁾ | tonnes | 325 | 284 | 665 | 572 | 1,218 |
| Magazine paper | | | | | | |
| SC magazine paper | tonnes | 114 | 121 | 231 | 240 | 502 |
| LWC magazine paper ²⁾ | tonnes | 52 | 56 | 105 | 107 | 214 |
| Kraft paper | tonnes | 7 | 7 | 14 | 15 | 29 |
| Fibre | | | | | | |
| Sulphate pulp | tonnes | 96 | 94 | 191 | 181 | 340 |
| CTMP | tonnes | 22 | 22 | 44 | 36 | 64 |
| Forestia | | | | | | |
| Sawn timber | m ³ | 184 | 173 | 350 | 322 | 654 |
| Particle board | m ³ | 98 | 96 | 200 | 185 | 368 |
| Flooring | | | | | | |
| Parquet flooring and laminates | m ² | 768 | 889 | 1,609 | 1,780 | 3,529 |

¹⁾ Includes Skogn, Follum, Golbey, PM 3 in Bruck and Steti from 01.11.1997

²⁾ Concerning PM 4 in Bruck

QUARTERLY PRODUCTION

| | <i>1,000</i> | 2nd Q 98 | <i>1st Q 98</i> | <i>4th Q 97</i> | <i>3rd Q 97</i> | <i>2nd Q 97</i> | <i>1st Q 97</i> | <i>4th Q 96</i> | <i>3rd Q 96</i> | <i>2nd Q 96</i> |
|----------------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Newsprint | | | | | | | | | | |
| Newsprint ¹⁾ | tonnes | 325 | 340 | 336 | 310 | 284 | 288 | 283 | 267 | 255 |
| Magazine paper | | | | | | | | | | |
| SC magazine paper | tonnes | 114 | 116 | 138 | 124 | 121 | 119 | 118 | 109 | 106 |
| LWC magazine paper ²⁾ | tonnes | 52 | 52 | 53 | 54 | 56 | 51 | 52 | 49 | 34 |
| Fluting ³⁾ | tonnes | - | - | - | - | - | - | 19 | 15 | 13 |
| Kraft paper | tonnes | 7 | 7 | 7 | 7 | 7 | 8 | 6 | 7 | 7 |
| Fibre | | | | | | | | | | |
| Sulphate pulp | tonnes | 96 | 95 | 93 | 66 | 94 | 87 | 90 | 90 | 73 |
| CTMP | tonnes | 22 | 22 | 22 | 6 | 22 | 14 | 13 | 12 | 17 |
| Forestia | | | | | | | | | | |
| Sawn timber | m ³ | 184 | 167 | 209 | 123 | 173 | 149 | 139 | 126 | 144 |
| Particle board | m ³ | 98 | 102 | 102 | 81 | 96 | 89 | 99 | 76 | 80 |
| Flooring | | | | | | | | | | |
| Parquet flooring and laminates | m ² | 768 | 841 | 1,017 | 732 | 889 | 891 | 1,209 | 839 | 790 |

¹⁾ Includes Skogn, Follum and Golbey, PM 3 in Bruck and Steti from 01.11.1997

²⁾ Concerning PM 4 in Bruck

³⁾ Concerning Sande Paper Mill AS which was sold 03.01.1997

The PM 2 project is on schedule

Golbey's competitive strength and quality strengthens Norske Skog



President and CEO Jan Reinås

"Our expansion is well-timed. Market forecasts show that consumption of newsprint in Europe is expected to rise by nearly two % in the coming time. That increases demand, and makes it necessary to add new capacity at regular intervals," says CEO Jan Reinås.

"The paper and pulp industry is undergoing a process of consolidation into larger units. It is becoming increasingly international, and increasingly dominated by global players. We must work tenaciously and strategically to meet these challenges. This is why we are strengthening our presence in our main markets and concentrating heavily on the quality of our products and the efficiency of our logistics and service.

With PM 2 in place, Norske Skog will have a modern, top competitive mill, centrally sited in Europe, and the Group will strengthen its position as a leading supplier of newsprint. A better balance between Norwegian and Euro-based newsprint production costs will also change Norske Skog's risk profile," says Jan Reinås.

"To date, Norske Skog Golbey has achieved its production and efficiency targets ahead of schedule," says Ketil Lyng, Norske Skog Golbey's managing director. Output of 250,000 tonnes and a total efficiency rate of nearly 90 % on PM 1 was achieved as early as 1997 - a year earlier than planned.

Lyng stresses that this favourable performance reflects the excellent efforts of everyone at the company. "We have a

first-class organisation, with a young, strongly motivated workforce. An excellent team spirit prevails at Norske Skog Golbey, and its employees are proud of their company and want to contribute actively to its success."

"We are determined to meet the challenges brought by the kind of increase in activity which PM 2 entails: to maintain quality and to improve customer service. Logistics and customer relations are just as important as production, and these two functions will be strengthened before PM 2 starts up," declares Ketil Lyng.

High activity at Golbey's PM 2

PM 2 at Norske Skog Golbey is on schedule. During the first quarter of 1999 Norske Skog will have the two most cost-efficient newsprint machines in Europe. The mill will account for half of France's newsprint capacity, and six % of Europe's.

The project is being completed in less than two years. Building work was finished, in the main, by spring 1998, and in March/April installation got under way. Activity at the mill peaked in April-June, with 1,100 people at work - 100 on the project staff and 1,000 at the facility. In June, testing and preparations for start-up began. This stage will continue for the rest of the year.

Parallel with the building and installation work, a comprehensive project is being implemented to create a highly proficient

organisation - adapted to the needs of the "new" Norske Skog Golbey. Many of the 330 employees will need further training; in addition, moreover, 150 new employees are going to be hired. The company expects, at certain periods, to have about 300 people undergoing training courses.



Managing Director
Ketil Lyng

Main elements of the project

* PM 2, supplied by Valmet, will have a capacity of 330,000 tonnes, increasing the capacity of Norske Skog Golbey to 600,000 tonnes/year. PM 2's wire width is 10.4 metres, with a design speed of 1,800 metres per minute - in practice, somewhat lower. As of today, the world's fastest is around 1,600-1,700 metres - which means that the paper track is running through the machine at a speed of about 100 km/hour!

* A new de-inking plant for waste paper with a capacity of 1,200 tonnes of de-inked pulp per day; this, together with the present plant, will raise capacity to 1,600 tonnes of de-inked pulp per day. Annual requirement, at full operation, about 500,000 tonnes of waste paper. The raw material base will be 60-85 % waste fibre and 40-15 % new fibre from timber. Utilisation of the existing plant for the production of thermomechanical pulp will rise.

* A new packaging line which will handle output from both paper machines and will require fewer operatives. Storage facilities for waste paper and finished products will be enlarged.

* We know of no newsprint mill, today, with lower effluents per produced tonne than Norske Skog Golbey. The mill was sized to achieve an approximately 30 % reduction of water consumption. The waste water treatment plant is being enlarged in line with the rise in output.

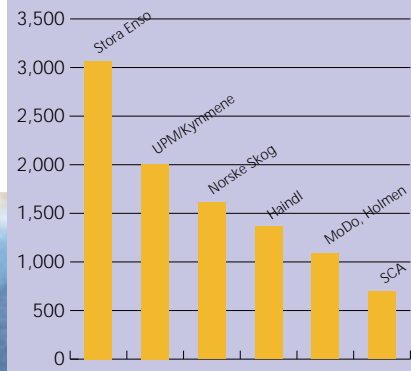
* All sludge and waste from the de-inking process in the waste paper recycling plant, and from the effluent treatment plant, will be dehydrated and incinerated in a new bio-fuel boiler.

* Investments will total NOK 2.8 billion - corresponding to NOK 8,500 per tonne of capacity, compared with NOK 12,000 for PM 1. Norske Skog Golbey will have low costs. The company will require only 0.8 of a man-year for each 1,000 tonnes of produced paper, compared with 1.2-1.4 at the best mills in Norway.

A buoyant economy benefits the printed media through increased advertising revenues, more pages and higher circulation figures. The European market for newsprint amounts to over 10 million tonnes – corresponding to about 30 % of the world market.

Europe's largest producers of newsprint 1998*

1,000 tonnes



*) Including special grades.



Photo: Glenn Røkeberg

Successful rebuild

S "After only a few weeks' operation we can see that the rebuilding of PM 5 has produced the desired results. The machine was started up according to plan, and both pulp and paper quality show promising analysis values. The rebuild means that Norske Skog Saugbrugs now has three paper machines for the production of best quality SC A-grade magazine paper," says mill director Oddvar Sandvei.



Mill director
Oddvar Sandvei

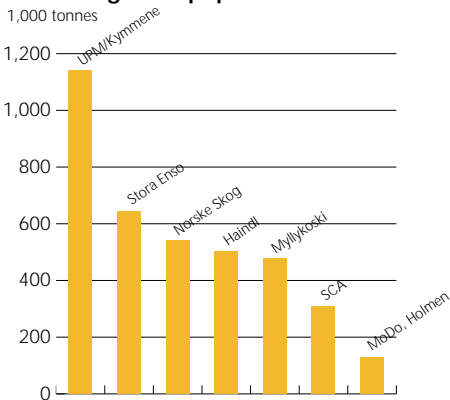
"We had been aware for some time that PM 5, in contrast to PM 4 and PM 6, was lagging behind on the quality side, and consequently we believed that the time was ripe to run a quality upgrade project, in order to measure up to our competitors abroad," Sandvei continues.

The new paper for rotogravure printing produced by PM 5 has already been tested by Hjemmet magazine, in Norway, with very good results - matching those achieved by paper from the

new PM 6 machine at Saugbrugs. As part of a start-up programme the new paper is now being run in large US printing firms.

"We now face an exciting period, in which we shall spend time on perfecting all stages of the process aimed at achieving the best possible printing properties. Good runability is today a prerequisite for winning contracts from the most important and demanding customers. Competition in SC magazine paper is extremely keen, and we believe that we are well equipped to meet it,

Europe's largest producers of SC magazine paper



with our three machines," concludes mill director Sandvei.

Saugbrugs in a global arena

SC (supercalendered) magazine paper is an uncoated, wood-containing printing paper which consists of 55-60 % mechanical pulp, 10-15 % chemical pulp and 30 % filler (clay). The paper is treated mechanically between rollers - so-called supercalendars - in order to achieve a more even surface and better printing properties. Its most important applications are in magazines and catalogues.

The world market for SC magazine paper is about 4.5 million tonnes, including about 2.5 million tonnes in Europe and 1.6 million tonnes in North America. During the period 1980-95 consumption of SC magazine paper increased by an average of 4.5 %/year. The most marked growth was in the US, with over 12 %/year. The world SC market is dominated by a few European producers.

In Europe the three largest producers (following the Stora/Enso merger) account for about 70 % of capacity.

Norske Skog produces SC magazine paper on three machines at Saugbrugs, in Halden. Total capacity is 540,000 tonnes/year, and the company has a 14-15 % share of the world market. Norske Skog Saugbrugs exports 99 % of its output and has customers throughout the world - primarily in Europe, North America and Asia. A large part of PM 5's output goes to American department store chains, which employ free sheets as an important marketing tool.

10 weeks' work, day and night - after years of preparation

After the rebuild Norske Skog Saugbrugs' PM 5 is producing best quality SC A-grade magazine paper for rotogravure printing, with printing properties equalling the best on the market, and with good runability in

d at Halden

Photo: Cathrine Dillner Hagen



printing machines. Coupled with a small increase in capacity, the higher quality and lower production costs will strengthen the company's competitiveness.

The upgrade involved a thorough renewal of the entire machine - a process which is carried out several times during the life of a paper machine. The main elements in the project are a new headbox, a new wire section, a new and modern process control system and a new winder - together with several projects in the raw material department aimed at improving pulp quality. The project also included an improved ventilation system and a new heat recovery system - something which contributes to a better work environment.

A project of this kind demands thorough and extensive preparation and planning - and concentrated effort during the implementation phase. First of all, a main study is undertaken - this, in the case of PM 5, was completed by October 1996. The Group's Board decided on November 6 that same year that the project should go ahead. The work of planning and procurement started immediately and continued to the end of 1997. The machine was taken out of production on February 14, 1998, and after ten weeks' installation work, involving more than 400 people, the machine was started up, as planned, on April 29. Total investment budget was NOK 400 million.

Among the many publications printed on paper produced by Norske Skog Saugbrugs' PM 5 is Norway's leading family magazine - Hjemmet.

Upgrading to improve competitiveness

The PM 5-project at Norske Skog Saugbrugs is one of several large projects aimed at improving Norske Skog's competitiveness. The mills are being almost continuously upgraded - both as regards their main machinery, such as the paper machines themselves, and as regards the surrounding infrastructure. These projects are to a large extent motivated by quality and environmental considerations, and a feature shared by all of them is that they show good profitability.

At the end of last year, Norske Skog Skogn completed a new biological effluent treatment plant and a new biofuel boiler. In February, moreover, it was decided to build a de-inking plant at this mill able to process 170,000 tonnes of waste paper annually. It is scheduled for completion in 2000 and will require investments of just under NOK 500 million.

At Norske Skog Follum, a new NOK 300 million wood handling plant is being built. The project has a definite quality profile, and follows up Follum's strategy of gradually moving from standard newsprint to special products with a high degree of added value.

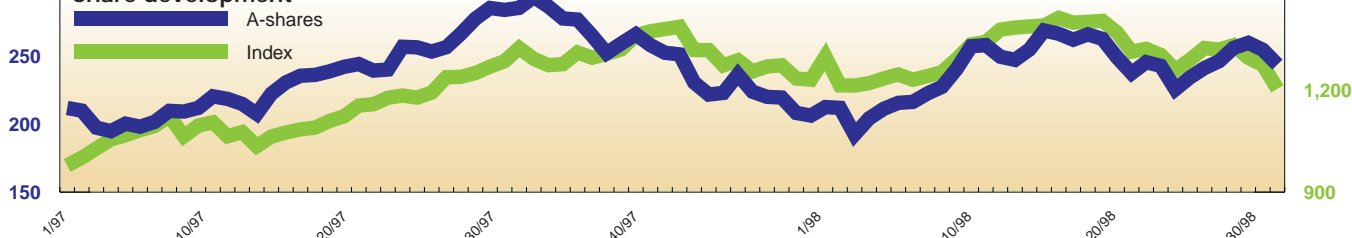
At Norske Skog Tofte, the TOFTE 400 project is being implemented, in stages, up to and including 2001. This project aims to achieve higher quality, an improved environment, and an enlargement of capacity from 360,000 to 420,000 tonnes/year. The investment involved is NOK 600 million, and it will exploit the potential of the existing main plant. The profitability of the project is very good.

Norske Skog shares

Key figures

| | First half 1998 | | | | | | Per 14.08.1998 | |
|---------------|----------------------|----------------------|--------|--------|--------------------|-------------------------|----------------|--------------------------|
| | Share price 02.01.98 | Share price 30.06.98 | High | Low | Earnings per share | Booked equity per share | Share price | Market value NOK million |
| Norske Skog A | 214.50 | 237.00 | 273.00 | 186.50 | 17.09 | 254.37 | 217.00 | 6,249 |
| Norske Skog B | 200.00 | 215.00 | 257.00 | 174.00 | 17.09 | 254.37 | 194.00 | 1,827 |

Share development





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