

In the last business year NA enhanced its leading market position in copper production and processing and achieved a very good annual profit.

Management Report – NA AG and NA Group

Outline conditions and trends in the industry

Growing copper demand

NA is located in the largest copper market in the world. In the business year 1999/2000 strong industrial growth worldwide stimulated the demand for copper. In Europe, our core market, copper demand grew by 6.8%, worldwide a rise of 7% was recorded. In the year 2000 about 15.1 million tonnes of copper were used worldwide, of which 4.5 million tonnes – thus almost 30% – in Europe alone. Copper demand in Europe is expected to increase in the next ten years by 1 million tonnes to almost 5.5 million tonnes p.a. In Germany – by far the largest market within Europe – it will grow in the same period from the current 1.3 to 1.6 million tonnes. According to the latest forecasts the world copper demand will increase in the year 2001 by 4% to 15.7 million tonnes and in the year 2002 by a further 3.3% to 16.2 million tonnes. In 2001 the European copper demand will in all likelihood rise by 3.5%. The intensity of copper utilisation is following the increasing development in almost all industrial sectors.

In the business year 1999/2000 NA benefited from the significantly increased demand for copper and copper products worldwide and an industrial growth of on average 3.8% in almost all the important

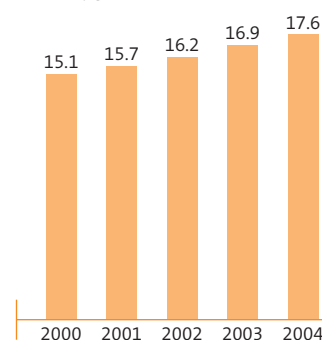
markets of the global economy. These outline conditions caused a positive trend in production and sales as well as declining stocks in the warehouses of the metal exchanges. Likewise, the inventories of the metal producers and processors as well as the price quotations on the exchanges did not remain unaffected by this.

Intensity of copper utilisation increases

After some time, relatively high rates of economic growth at almost 3.5% could be recorded in the West European region. Increasing product sales, particularly in the copper processing industries, such as telecommunications, electrical engineering, electronics and automotive, had a decisive impact on NA's positive business performance. Thus, for example, the German electrical engineering industry achieved turnover growth in terms of value of about 15% in the year 2000. For 2001 further turnover growth of 6% is expected. Only the construction industry was still stagnating at a low level.

NA's positioning and strategic orientation within the copper value-added chain had a direct impact on the annual profit. The mines, from which the copper concentrates are procured, profited from the increasing copper prices and were accordingly in a position to pay NA good treatment and

Forecast for global copper demand
in mill. t



Source: Brook Hunt, Dec. 2000

Management Report

Outline conditions and trends in the industry

refining charges (TC/RCs). The fabricating industry participated in the export boom and in this way generated an increasing demand for Norddeutsche Affinerie's products.

The copper price rises...

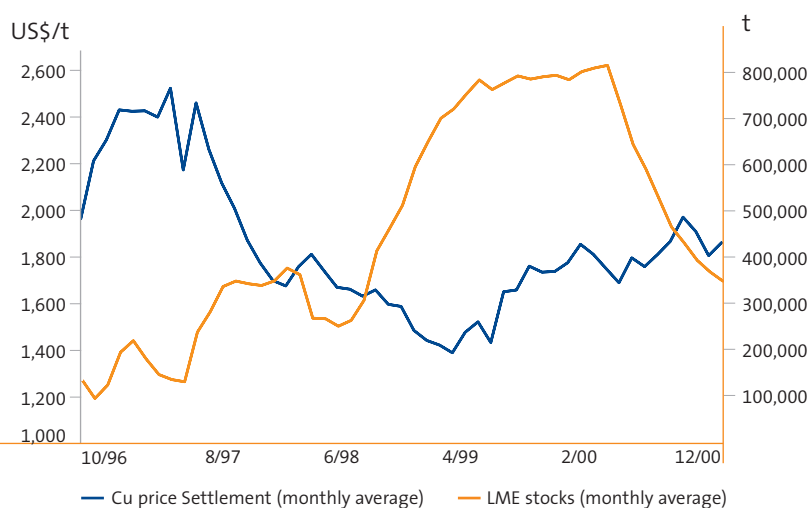
In the business year 1999/2000, the rise in the copper price which started at the end of the last business year continued. The demand for copper increased, above all, in the second half of the business year. The reason for this development was the structural and economic recovery in most Asian economies, the stable economic situation in North America as well as the economic upturn in Western Europe. On this recovery route the copper price surpassed the 2,000 US\$ mark for a short time mid September. At the end of the business year 1999/2000 copper was traded on the

LME at 1,978 US\$/t (Settlement). By the end of the year 2000 the LME quotation had declined to 1,808.50 US\$/t. However, according to analysts' forecasts, the copper price will continue its upwards trend. The estimates for the year 2001 are in the range of 2,000 US\$/t and 2,200 US\$/t.

...while inventories decline

Until the beginning of March 2000, due to the existing excess of supply over demand, the copper stocks at the LME and COMEX exchanges first rose to 930,000 tonnes. On account of the rising global economy, the demand for copper and copper products increased faster than mine output. This resulted in a rapid decline in stocks. From March onwards they dropped on average per market day by 3,250 tonnes and by the end of the business year had been halved to about 459,000 tonnes. The decline in stocks continued at a slower rate until they had reached a level of 416,000 tonnes at the end of the year 2000.

Copper prices and LME stocks



Highlights of the business year in the NA Group

Highlights in the NA Group

For the NA Group the business year 1999/2000 was again very successful. The most significant projects included the integration of Hüttenwerke Kayser AG (HK), the merger of the agrochemical activities in SPIESS-URANIA Chemicals GmbH as well as the expansion of our East Smelter (Project RWO 2000). In addition, the NA Group's copper powder activities were spun off into MicroMet GmbH Pulvertechnologie.

The very good demand for NA's copper products, the integration of Hüttenwerke Kayser in the NA Group and increasing copper prices were decisive for the positive business trend in the year under review.

Leading position enhanced

The NA Group has now taken up a leading position worldwide in the copper industry. When assessed by its production capacity of 550,000 tonnes of cathodes p.a., the Group is the largest integrated copper producer in Europe and is ranked at fourth position in the world. With an output of about 197,000 tonnes of continuous cast shapes, NA has managed to enhance its leading position in Europe still further. For continuous cast wire rod NA is still at third position in the European market with an output of 382,000 tonnes, but has been able to close the gap somewhat to the European market leaders.

Product competence

The new plant for oxygen-free and low-alloyed copper qualities was successfully commissioned in September 2000. This is used to produce products for qualitatively high-grade applications in the telecommunications industry by means of optimised casting techniques.

Capacity expansion

The raw material processing plants at NA and its subsidiaries were fully utilised throughout the year and sufficient supplies of raw materials assured at any time.

In the second half of September 2000, after a record running time of nine years, NA's core plant, the East Smelter (RWO), was put out of operation for extensive repair work and a capacity expansion. The measures were finished as scheduled at the beginning of November 2000 and the RWO started up again. As a result of this investment we are optimally prepared for the rising copper demand and the growth on the concentrate market. The expansion increases the RWO's throughput capacity by about 35 % to approx. 1 million tonnes of copper concentrates p.a.

Management Report

Highlights of the business year in the NA Group

Successful integration

With its concentration on the recycling of copper and copper's co-metals, Hüttenwerke Kayser ideally complements the activities of the NA Group. Consequently, NA's position in the secondary copper business and in the market for continuous cast wire rod could be significantly strengthened.

The integration of HK was progressed as a Group project and has meanwhile been successfully completed. HK has taken over responsibility for metal scrap procurement for the NA Group; the sales of copper products are carried out by NA. This concentration of the NA Group's core competence has heightened competitiveness and profitability. The secondary copper business will be further strengthened by the construction of a new smelter at HK which was started in spring 2000.

Precious metal business complemented

In August 2000 NA reached an agreement with Degussa Metals Catalysts Cerdec AG (dmc²) whereby NA would take over its gold and silver parting business. The anti-trust authorities gave their approval in September 2000. The takeover was completed in October 2000. NA's precious metal business, which was hitherto limited to the recovery of gold and silver from copper concentrates and recycling materials, is

optimally complemented. Thus, NA has expanded the processing of precious metal bearing raw materials and can utilise its facilities in this sector even better. The collaboration with dmc² which was already intensified in the business year 1999/2000 and the increased input of anode slimes from outside sources resulted in a quantum jump both in quantity and value: the output of silver and gold rose by 30% and 17% respectively.

Turnover and profit

Due to very strong unit sales, the consolidated turnover in the business year 1999/2000 could be increased by 67% to 1.897 billion €. This was essentially attributable to the takeover of Hüttenwerke Kayser AG as well as the steady rise in product sales for copper and precious metals throughout the year and the increased copper price.

Compared with the previous year, the consolidated profit before taxes on income improved by 20 million €, i.e. 41%. The profit of NA AG could be increased by 4 million € to 54 million €.

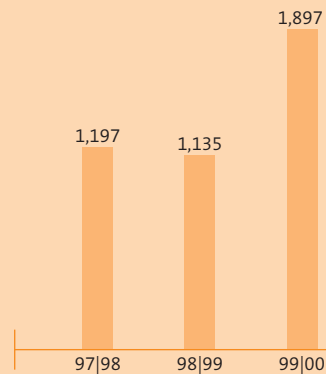
Financial position

The structure of the NA Group's assets and capital is stable and balanced. It shows that there is potential for further internal and external growth to achieve a sustained increase in company value.

The integration of Hüttenwerke Kayser AG in the NA Group and the capacity expansion of the copper concentrate processing facilities at NA have been partly funded by the raising of loans. As a result the balance sheet ratio between equity and liabilities has changed. Nevertheless, the NA Group still has a very sound equity proportion of 38% in comparison with other companies in the industry.

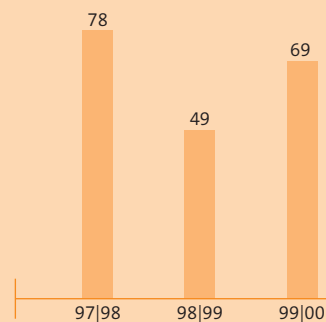
Consolidated turnover

in mill. €



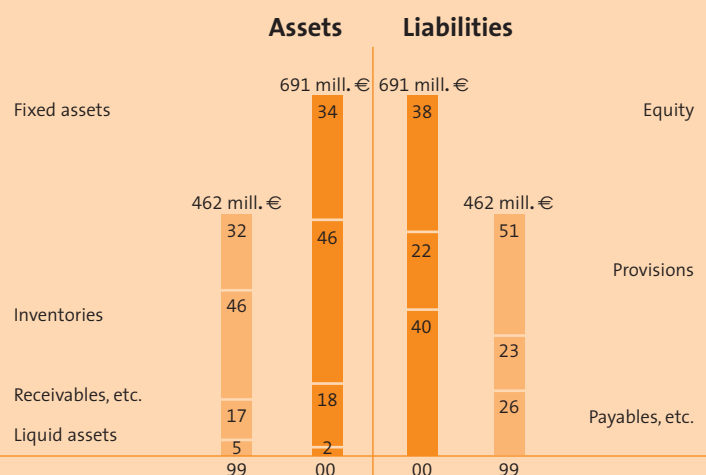
Consolidated profit before taxes on income (EBT)

in mill. €



Consolidated balance sheet structure

as at 30.9. in % of the balance sheet total



Management Report

NA has repositioned itself by the acquisition of Hüttenwerke Kayser and the expansion of its product business. The Group's main Segments are

- METAL PRODUCTION and
- COPPER AND COPPER-RELATED PRODUCTS.

Operating review in Segments

For the NA Group, the copper-containing raw materials and the copper products (cathodes, continuous cast wire rod and shapes) produced from them are the most important contributors to turnover and profit. Co-products from copper production such as precious metals, iron silicate stone and metallic and chemical special products make up the product spectrum.

Segment 1 – Metal Production	
mill. €	99 00
Turnover	1,177
EBT*	36.5
EBIT	40.2
Capital expenditure	63.9
Depreciation	25.1
Number of employees (average)	2,220

*Without minority interests

The NA Group is represented in major market Segments



Segment 1 – Metal Production

The Metal Production Segment comprises NA AG's business units, which are active in this Segment, and connected subsidiaries. The Segment's value added is generally determined by treatment and refining charges (TC/RCs). These are payments received for transforming raw materials to marketable refined metals. For copper concentrates, the most important raw material, the TC/RCs are usually paid in US\$; in consequence, NA has a profit sensitivity as regards the US\$:€ exchange ratio. However, in the year under review this did not have an impact since we had hedged our anticipated US\$ income. The Segment contributed 36.5 million € to the consolidated profit before taxes on income and without minority interests. The average number of employees amounted to 2,220.

• NA AG's Business Unit 1 "Copper Production and Recycling"

Within the framework of the Metal Production Segment, the NA Business Unit 1 "Copper Production and Recycling" produces copper cathodes as its main product. These are made of at least 99.99 % pure copper. The copper is won in an electrolysis process (copper tankhouse) in the form of copper plates, about 1 m x 1 m in size and with a thickness of 6 – 8 mm. NA's copper cathodes are registered at the leading metal exchanges in the world (LME and COMEX).

Metal Production Segment

Copper cathodes are mainly produced from copper ores and recycling materials, such as copper scrap. The ores are already processed in the mines of their countries of origin to a concentrate, which contains on average about 30 % copper. Supplies are delivered from every continent, of which South America is the most important procurement market.

Copper scrap is generally bought in Western Europe and the CIS states. The material is pressed into packets at NA and melted largely with the energy available from the concentrate processing and subsequently refined to high-grade copper cathodes.

Sulphuric acid and iron silicate products are additionally recovered as co-products from the sulphur and iron contents in the concentrates. The precious metal content in the raw materials is further processed by the NA Business Unit 3 "Precious Metals".

Positive business year

The business year again was very positive. The production of copper cathodes at almost 368,000 tonnes exceeded the previous year's figure (366,000 tonnes). Of this output the largest part was produced from copper concentrates with a quantity of 729,000 tonnes (previous year 737,000 tonnes), most of which were processed in the flash smelter furnace.

Copper concentrates

The market for copper concentrates developed to our advantage. Whilst our TC/RCs from long-term supply agreements concluded earlier were still slightly reduced, we could buy additional spot quantities at significantly better terms than in the previous year. On the international spot market the TC/RCs have recovered from their historical previous year's low and have practically doubled. The – from our point of view – further improved US\$:€ exchange rate also had a positive impact on our results.

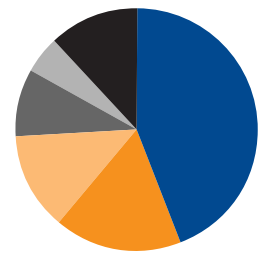
Copper scrap

At about 140,000 tonnes, the input of copper scrap was at a very high level (previous year: about 114,000 tonnes). Due to this increased input of copper scrap, it was possible to maintain full production in the copper tankhouse at the end of the business year during the scheduled smelter standstill (Project RWO 2000).

Despite deliveries of copper scrap from Russia and the Ukraine being increasingly impaired by export duties and export restrictions, the refining charges for the material improved substantially compared with the previous year. An important reason for this was the increase in the copper prices.

Concentrate supplies

in %



NA BU 1 Production figures

('000 t)	99 00	98 99
Input of concentrates	729	737
Input of copper scrap	140	114
Copper cathodes	368	366
Sulphuric acid	699	703
Iron silicate products	460	494

Management Report

Metal Production Segment

Our melting aggregate for intermediary products and various recycling materials could again be fully utilised. In addition, through technical optimisation, we have increased the possible quantities and the type of copper scrap which can be refined in our Contimelt plant.

Quality improvement

With almost 700,000 tonnes our output of sulphuric acid was again at the previous year's level. The revenues from acid sales declined in the course of the business year, since the demand in Europe was noticeably reduced due to two fertiliser producers closing down their production plants. Nevertheless, since we commissioned an additional cleaning stage and thus improved our acid quality considerably, we were still able to increase the spread of our acid sales further, particularly in the chemical industry.

Project RWO 2000 – extensive modernisation and expansion

In the business year 1999/2000 the expansion of the processing capacity for copper concentrates in the East Smelter (RWO) was one of NA's most important strategic measures. It was also the largest investment within the framework of Vision NA 2000. With this measure, we are expanding our core business in order to achieve a sustained significant improvement in results. The modernisation investment will already have an overall impact on profits in the business year 2000/2001.

With a capital expenditure volume of about 100 million €, the RWO's concentrate processing capacity was increased by more than 35 % to a throughput of approx. 1 million tonnes of copper concentrates p.a. At the same time 40 additional permanent workplaces were created at NA AG.

The Project RWO 2000 was completed whilst the flash smelter furnace and connected plants were being overhauled in November 2000. The scheduled overhaul was necessary in any case after a record running time of nine years and thus could be optimally used for the project.

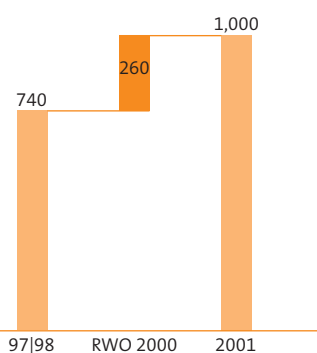
Cost position and productivity significantly improved

As a result of the project, the processing costs for copper concentrates will be cut and productivity substantially enhanced. Consequently, NA will considerably improve its position in international competition. The time was right because the offer of copper concentrates on the world market will increase in the medium term. For example, in the year 2001 a new large copper mine in Peru will be put into operation. We have therefore already concluded a comprehensive long-term supply agreement with this mine.

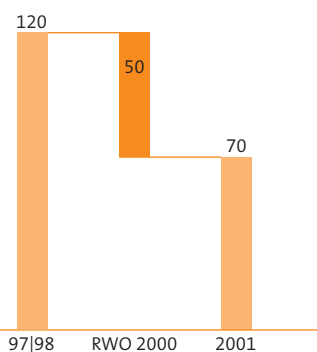
A further advantage of the project is that NA AG will in future only need to buy considerably reduced quantities of raw materials on the volatile markets for copper scrap and blister copper. This decrease in our own demand will greatly improve the

Project RWO 2000

Increase in concentrate throughput in '000 t p.a.



Reduction in input of copper scrap and blister in '000 t p.a.



procurement possibilities of our subsidiary Hüttenwerke Kayser: HK is specialised in the treatment of these materials.

Since the specific emissions from the concentrate processing will be further reduced by the modernisation, further progress in environmental protection has, in parallel, been achieved due to the project. Thus, here as well, we are continually enhancing our worldwide leading position.

Plants optimised

In the course of the business year a number of major plants belonging to the project were installed. These included the installation of a new dryer and the replacement of the three converters by new larger units. In addition, a new crane was commissioned in the converter hall as well as an automatic device for charging copper scrap into the converters. In the acid plants the enlarged facility for the treatment of waste water was also commissioned in advance. All the other individual projects were prepared on schedule and were ready for operation when they were installed during the standstill for repair work in the RWO and acid plants.

This modernisation marathon aroused lively interest in the media. During the standstill the plant was the largest construction site in Hamburg employing up to 1,000 craftsmen each day at the same time.

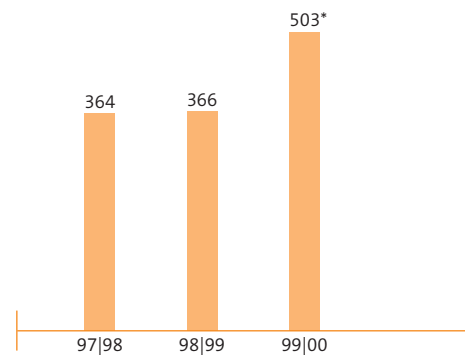
Always able to meet delivery commitments despite construction work

During the overhaul, the output of copper cathodes in the copper tankhouse was assured by the increased utilisation of the Contimelt plant and the stocks of anodes accumulated beforehand. As a result, the processing facilities for copper products could be fully utilised and NA was always able to fulfil its delivery obligations. The stock levels have normalised again since the work was finished in November 2000.

Supplies assured

Our supply of copper concentrates is to a great extent already covered for the current business year due to the supply agreements concluded. We are therefore again expecting our copper tankhouse to be fully utilised. Sales of the additional sulphuric acid output arising due to the higher concentrate throughput are assured. About two thirds of the new total output corresponds qualitatively to the high-grade sulphuric acid produced from brimstone. In the copper scrap sector, we are expecting further positive impacts from our joint procurement activities with Hüttenwerke Kayser.

Cathode output
in '000 t



*Including HK since 1.1.2000

Management Report

Metal Production Segment

• Hüttenwerke Kayser AG (HK), Lünen

Hüttenwerke Kayser AG is the largest recycling enterprise worldwide for copper-containing secondary raw materials, such as copper scrap. On 30 September 2000 HK had a total of 684 employees including apprentices.

Stronger together

With its integration in the NA Group as of 1 January 2000, HK's earnings have followed a very positive trend. Apart from the favourable conditions on the copper and recycling markets, this is attributable to the results of a post merger management project involving the entire Group. A clear division of work in the Group was agreed between NA AG and HK AG in order to exhaust all the available synergies and earning potential. The NA Group's market performance could be significantly optimised: the coordination of Group activities on the secondary raw material markets is now being carried out by HK. In product sales NA has taken over the marketing of the copper products from both companies.

Since, for decades, HK has specialised in the recycling of metals, it has acquired outstanding expertise in copper recycling. Hüttenwerke Kayser is therefore an essential link in the environmentally beneficial cycle of copper as the material of the future, and in this way strengthens the NA Group in the recycling and secondary copper business.

In combination with HK – European market leader

In all, approx. 250,000 tonnes p.a. of secondary raw materials are treated at HK, which are used to produce approx. 180,000 tonnes of high-grade copper cathodes. As a result, the NA Group has a total copper tankhouse capacity of 550,000 tonnes p.a. and is the European market leader. The integration of Hüttenwerke Kayser has also significantly strengthened the position of the NA Group in the German and European copper markets. Since HK's consolidation on 1 January 2000 about 135,000 tonnes of the NA Group's cathode output, which totals approx. 503,000 tonnes, has been produced by HK. Hüttenwerke Kayser is also expecting the copper market to develop well with positive impacts on the metal scrap and copper recycling markets in the next few years.

Investment in the future

The copper refining plant at HK, including the copper tankhouse, is modern; in contrast, the melting operations must be made more efficient. Consequently, in June 2000 work was started on the construction of a new ISA Smelter. This investment requires capital expenditure of about 36 million € and will be commissioned in spring 2002.

HK's production figures

('000 t)	Jan. until Sept. 2000
Input of copper-containing secondary copper	183
Copper cathodes	135

- **CABLO Metall-Recycling & Handel GmbH (CABLO), Hamburg**

CABLO, as Germany’s largest cable recycling enterprise, together with Hüttenwerke Kayser AG covers a significant part of the NA Group’s recycling activities.

CABLO’s processes are particularly environmentally friendly, since the cable is always dismantled mechanically. With workshops in Fehrbellin in Brandenburg and Strass/ Nersingen in Bavaria, the company has two modern production locations. Copper in the form of metal granules is primarily recovered from cable scrap from telecommunications and power supplies as well as production scrap arising during cable manufacture. These granules are sold to NA AG, to MicroMet GmbH Pulvertechnologie or to other customers outside the NA Group.

In the business year 1999/2000 a total of about 21,000 tonnes of cable was dismantled, from which approx. 10,000 tonnes of metal granules were recovered.

On 30 September 2000 CABLO had 69 employees.

- **NA AG’s Business Unit 3 “Precious Metals”**

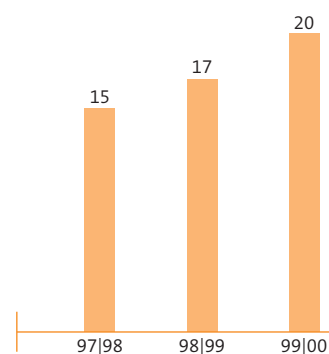
NA’s Business Unit “Precious Metals” (NA BU 3) ideally complements the production of copper from copper concentrates and recycling materials, because it safeguards the optimal recovery of the precious metals contained in the raw materials. This is one of NA’s particular strengths compared with its competitors who generally have to sell their precious metal-containing intermediary products to third parties.

The precious metal containing intermediary products of NA and Hüttenwerke Kayser – supplemented by precious metal-containing bought materials – are processed in NA BU 3 to saleable gold, silver and platinum group metal products. The processes have been optimised in the last three years by inter alia the installation of a top blown rotary converter.

Expansion of the gold and silver parting business

After a close cooperation had been built up over some years, NA reached an agreement with Degussa Metals Catalysts Cerdec AG (dmc²) in August 2000 to take over the latter’s gold and silver parting business. In so doing, we have the possibility of substantially enhancing our raw material supplies on the precious metal side and hence of improving the utilisation of our plants still further.

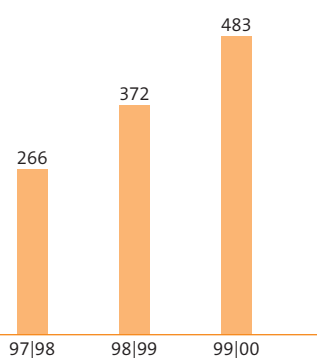
Gold output
in t



Management Report

Metal Production Segment

Silver output
in t



Precious metal production could be significantly increased. A gold output of 20 tonnes was achieved, thus 3 tonnes more than that in the previous year. Silver output increased by 111 to 483 tonnes (previous year 372 tonnes).

- **RETORTE Ulrich Scharrer GmbH (RETORTE), Röthenbach**

The anode slimes from the copper tank-house are the most important precious metal-containing intermediary product at NA and other copper smelters. Apart from precious metals, these contain selenium, a significant co-element. NA recovers this selenium in the form of crude selenium and sells it to its subsidiary RETORTE. From this crude selenium, the company produces high-grade selenium chemicals for the glass industry for staining and decolouring glass, for the animal fodder industry as a trace element and for many other applications, such as the electrooptical, pharmaceutical and galvanic industries. On 30 September 2000 the company had 28 employees.

- **PEUTE BAUSTOFF GmbH (PBG), Hamburg**

Iron silicate products in the form of stone and granules are produced from the iron silicate arising during copper production from concentrates and recycling materials. They are sold via PEUTE BAUSTOFF GmbH as construction stone for levees, canals, river embankments and sea shores or as granules for abrasives.

The production of iron silicate products has grown continually over recent years as a result of the increased smelter throughput at NA and in the business year 1999/2000 amounted to approx. 460,000 tonnes. The output will increase again significantly as a result of the expansion of the processing capacity at NA. There were 11 persons employed on 30 September 2000.

Copper and Copper-related Product Segment

Segment 2 – Copper and Copper-related Products

The Copper and Copper-related Product Segment comprises the Business Unit “Copper Products” (NA BU 2) of NA AG as well as the NA Group subsidiaries belonging to this Segment.

Copper and Copper-related Products represent the second value-added stage of the NA Group and ideally complement the metal production sector. The Segment’s value-added is largely determined by the shape surcharge. This is the remuneration which the customer pays in addition to the copper price set by the metal exchange and covers the further processing of the cathode to, for instance, continuous cast wire rod or shapes.

The starting materials for our copper products are high-grade copper cathodes. The products are, in general, tailor-made for our customers and are subject to the highest quality requirements.

The Segment contributed 27.8 million € in 1999/2000 to the consolidated profit before taxes on income and without minority interests. The average total number of employees amounted to 934.

• NA AG’s Business Unit 2 “Copper Products”

In the Business Unit “Copper Products” (NA BU 2) continuous cast copper wire rod and shapes are produced from copper cathodes by melting, alloying and reforming. These are the semi-finished products for the production of cable and wire, tubes, sheets, strip and foils. Our products’ high quality, which is based on the quality of our copper cathodes as well as on our special know how, enables our copper products to be used for demanding applications, in particular in the electrical engineering and electronics industries.

Modern plants

NA operates several plants for the production of these products including one for continuous cast wire rod with a throughput of 45 tonnes per hour and a multi-strand continuous casting plant for copper shapes.

In the Business Unit “Copper Products” there was a total of 297 employees on average over the business year. This figure includes 61 employees in NA AG’s analytical laboratories, which, as a service provider for the whole of NA, belong to NA BU 2.

Segment 2 – Copper and Copper-related Products

mill. €	99 00
Turnover	1,565
EBT*	27.8
EBIT	33.0
Capital expenditure	14.9
Depreciation	7.6
Number of employees (average)	934

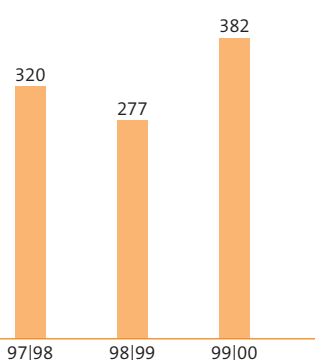
* Without minority interests

Management Report

Copper and Copper-related Product Segment

Wire rod output

in '000 t



A plant comparable with the Hamburg wire rod plant is also operated at Deutsche Giessdraht (DG) in Emmerich. With the takeover of Hüttenwerke Kayser, the NA Group also acquired HK's 20 % indirect stake in DG and thus is meanwhile entitled to about 60 % of the wire rod produced there.

In Hamburg a TOP ROD plant was commissioned for the production of special products in July 1999 and a casting plant for oxygen-free and low alloyed copper in September 2000.

The essential factors for successful sales of our copper products are cost-effective production, the concentration on qualitatively high-grade copper materials and a customer-oriented technical and commercial service.

Trend in business

Throughout the business year the output and sales of continuous cast wire rod and shapes were almost uninterruptedly at a very high level. Consequently, new records were achieved and the previous year's quantities exceeded by more than 36 %.

The economic climate in Europe and the strong US\$ in relation to the € favoured our successful intensified marketing.

Continuous cast wire rod

In the rod plant, cathodes are transformed to continuous cast wire rod with a diameter of 8 to 20 mm. With this product, NA has captured a leading position in Europe as regards both costs and quality.

In the business year 1999/2000, a total of about 382,000 tonnes of wire rod was produced. Compared with the previous year this is an increase of approx. 38 %.

Since June 2000 NA has covered all the marketing of HK's share of Deutsche Giessdraht's production.

Position enhanced

Despite an intensive competitive climate, the NA Group could further strengthen its market position as the third largest European wire rod producer due to its high product quality and reliability. NA's market share in Europe amounts to approx. 14 %. The economic climate in Germany and Western Europe was significant for this development, since it benefited the strong demand from the cable and wire industries for NA products. These branches also profited from the strong US\$ and could substantially increase their exports to the USA and the Far East.

During its first production year, our new special product, TOP ROD, has already been increasingly well accepted in the galvanic industry and profile fabrication. We have meanwhile additionally commenced the development of high-grade alloys in various diameters for the electrical engineering industry in collaboration with our customers.

Continuous cast shapes

Cakes and billets with piece weights of up to 25 tonnes are produced from copper cathodes in the continuous casting plant. NA has conquered a very strong market position, especially for copper products with high conductivity for the electrical engineering and electronics industries. In all, 197,000 tonnes of continuous cast shapes were produced, an increase of more than 30 % compared with the previous year.

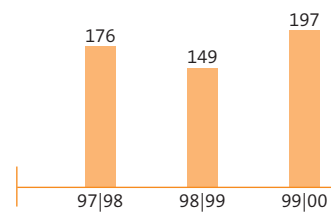
We have thus enhanced our leading position in Europe with a market share of more than 38 %. During springtime, the positive economic trend favoured an extremely high demand for continuous cast products, which then stabilised at a high level. The main customers were the electrical engineering and electronics industries as well as the telecommunications branch. In particular, the rapid expansion of mobile phone networks and the large submarine cable projects for the transfer of energy and information had a decisive impact on sales of our continuous cast shapes.

OF plant – Know how and product competence

The new plant for the production of oxygen-free (OF) copper and special alloys was successfully commissioned in September 2000. The already strongly increasing orders for OF copper are essentially due to the rapid growth in the telecommunications industry. Shielded cable is used for this branch's innovative technological applications. OF copper is used to a great degree to provide the shield since it guarantees the highest conductivity.

The possibility of producing OF copper in shapes with piece weights of 25 tonnes has made NA the benchmark – not just in Europe.

Continuous cast shape output
in '000 t



Management Report

Copper and Copper-related Product Segment

- **Deutsche Giessdraht GmbH (DG),
Emmerich**

DG was founded in 1975 by the Chilean copper producer Codelco (40%), Hüttenwerke Kayser AG (20%) and NA (40%). Since 30 December 1999 the NA Group including HK holds a direct stake of 60 % in the company via the Gesellschaft für Metallanlagen mbH. With the greater integration of DG the NA Group has further enhanced its position in the European wire rod market. DG produces continuous cast wire rod with diameters of 8 to 16 mm. In the business year 1999/2000 a quantity totalling about 236,000 tonnes was achieved. On 30 September 2000 the company had 119 employees.

- **MicroMet GmbH Pulvertechnologie
(MicroMet), Hamburg**

MicroMet was established when NA's former metal powder sector was spun off and since then it concentrates exclusively on the production and marketing of future-oriented – primarily copper-based – metal powders. In the business year 1999/2000 a total of more than 5,000 tonnes of powder was produced and sold. The company had 70 employees on 30 September 2000.

- **SPIESS-URANIA Chemicals GmbH, Hamburg**

SPIESS-URANIA Chemicals GmbH has a special position in the Copper and Copper-related Product sector. A direct industrial connection with NA AG has arisen through copper chemicals which make up roughly a 20 % share of the turnover of SPIESS-URANIA Chemicals GmbH and are produced in NA's works. Since 1 October 1999 the NA Group's copper chemical activities have been integrated in the company as part of restructuring measures. As a consequence, the business was expanded to include industrial applications for copper-based chemical products.

SPIESS-URANIA Chemicals GmbH was formed on 1 October 1999 as a result of the backdated merger of C.F. SPIESS GmbH & Co. with URANIA Chemicals GmbH. NA holds a 60 % stake in the new company. As a result of the tactical merger in May 2000 a project is being processed in order to use any merger-related optimisation possibilities.

Strengthened by the merger

The formerly independent SPIESS and URANIA have for decades been specialised in the development, production and distribution of agrochemicals and were active in different regions. For many years they have worked closely together. The merger was thus a significant strategic step to strengthen the position on the German agrochemical market and has meanwhile resulted in the company's being ranked "no. 5" on the market. In addition to enhancing the market position, the merger offered synergies in product registration, distribution rights, research and development as well as administration.

SPIESS-URANIA is active in the production and export worldwide of copper-bearing chemicals for industrial and agricultural applications. In addition, it offers services, such as vegetation control on railway tracks.

The merged company owns workshops in Kleinkarlbach (Rhineland-Palatinate), modern research centres in Christinenthal (Schleswig-Holstein) and Kluftern (Baden-Württemberg) as well as a production plant in Ochsenfurt (Bavaria). On 30 September 2000 it had 233 employees.

Management Report

Service sectors

The NA service sectors are central know how providers and make a significant contribution to the Group's earnings.

Continuous process optimisation in all sectors, the development of new products and a highly efficient staff strengthen our leading position.

“Technical Services and Materials Procurement” sector

The “Technical Services and Materials Procurement” sector is responsible for ensuring continued production and process optimisation. As a service provider it therefore supports the business units in NA AG and increasingly as well the subsidiaries in the NA Group. It makes a significant contribution to the consolidated earnings by running value-retaining maintenance programmes and making improvements to the logistical processes in the works area. NA has taken up an internationally leading position with this service unit as regards equipment availability. Apart from the central workshops of the electrical engineering, instrumentation and control technics, this unit includes transport and material procurement, the design and construction department as well as the power supplies.

The procurement management combines the know how of the technicians and commercial staff in project groups. Regular exchanges of information enable market opportunities to be used to ensure procurement of the supplies and services for the whole NA Group at the best possible conditions.

Reduced energy costs

The sector “Technical Services and Materials Procurement” has specialised in power supplies. Apart from personnel expenses, energy costs are a significant cost factor for NA. Intensive negotiations with the power-producing industry have, however, resulted in reduced electricity prices.

The preparations for the modernisation of the East Smelter (RWO), which began in September 2000, were a main theme during the entire business year. Thanks to painstakingly precise planning it was possible to keep to the schedule and budget.

The millennium did not cause NA any problems. The company's own power plant was in operation in order to provide an emergency supply in the event of a power cut.

Service provider for the Group

The target of the service unit in future will remain the continuous reduction of its costs and the strengthening of its function as a service provider for the whole NA Group. Important projects are the strategic reorganisation of the concentrate deliveries from the vessel to the works in Hamburg

and the expansion of the energy management for the entire Group. With all measures taken, the increased use of synergies with NA's large subsidiaries, Hüttenwerke Kayser and Deutsche Giessdraht, is being given priority .

Research and development

Our R & D Department works closely with NA's production plants in order to continually improve existing processes and products. In addition, new products are also developed. Initially they are conceived on a laboratory scale and from there, after being positively assessed, they are developed to production scale. Apart from the R & D Department the specialists from production, technology and marketing participate in this innovation process.

The R & D projects in process optimisation had the priority tasks of process monitoring and control. The joint target of these activities was the direct monitoring and control of different metallurgical processes at a high temperature and in the molten metal flow by means of modern technology and special sensors. Compared with conventional methods, numerous advantages result as regards increased production efficiency and production quality as well as an improved process cycle.

Innovative products

We have also worked out concepts for new products with our subsidiaries SPIESS-URANIA Chemicals and MicroMet. An example: a specially developed copper salt – the so-called basic copper nitrate – will take over an elementary function in the newest generation of airbags.

Successful pilot plant

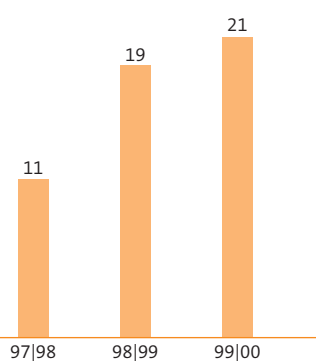
NA's most future-oriented R & D projects include the direct casting of copper strip from cathodes in one heat. This thin strip casting could in future complement the current production of sheet and strip from cast shapes. Today, initially about 150–200 mm thick cakes are produced by means of the continuous casting process and then rolled in several steps. The new process in contrast should save the first rolling steps and the surface milling.

A directly cast 3–6 mm thick copper strip results in significant cost savings at the customer's plant in the production of thin strip and sheets. The overall positive results in the pilot plant show that, with our technology, a new more cost-effective process for the production of copper flat products is possible.

Management Report

Service sectors

Capital expenditure in environmental protection
in mill. €



Copper-based solar cells

Another main theme is the participation in the development of copper-based solar cells, which are expected to have significantly lower production costs. The cells based on the elements copper, indium and selenium (Cu, In, Se = CIS) are coated electrochemically on a flexible copper strip and are thus extremely light as well as almost unbreakable.

NA AG's direct capital expenditure in research and development in the business year 1999/2000 amounted to about 4 million €. In the next few years, including the expenditure for the casting of copper strip project and the further development of the CIS technology it is expected to rise to an average of about 6 million € p.a.

Environment and energy

As a modern copper producer, the care of resources in the sense of sustainable development and the minimisation of environmental impacts are amongst our most important company targets. In this, we have today taken up a leading position in all aspects of environmental protection: we are amongst the leaders worldwide as regards air pollution control, the prevention of water pollution and the avoidance of waste. On average over many years, 30 % of capital expenditure has been directed into environmental protection. In the business year 1999/2000 NA invested about 21 million € in this sector. A significant part was directed into the Project RWO 2000. The constant improvement of the environmental standards is one of the targets of the greatly enlarged NA Group. Thus, some important steps have already been implemented to introduce further environmentally friendly and, at the same time, more cost-effective processes at Hüttenwerke Kayser AG.

High environmental standards

By the use of new technologies which are more energy-efficient and produce less off-gas, NA's excellent environmental position is being constantly optimised. As a result, the modernisation of the East Works (RWO) includes a series of measures to protect the environment, which are particularly

oriented to cut fugitive emissions. The target of this capital investment is to improve the ambient air quality in NA's immediate vicinity despite the capacity expansion. Together with the environmental authorities we are taking regular measurements to discover further possibilities for optimisation.

In the last business year, extensive licensing procedures were successfully completed to obtain construction and operation permits. These were inter alia the prerequisites for the expansion of the East Smelter (Project RWO 2000) and the construction of the continuous casting plant for oxygen-free copper (OF plant).

In addition, all NA plants were examined in accordance with the new Hamburg legislation on plants which handle water pollutants (VAWS). This concerns inter alia sulphuric acid and copper electrolyte. As part of these measures, we also compiled a new plant cadastre.

Besides instruction within the framework of the inhouse training courses, we have carried out practice-related seminars on environmental protection with 100 RWO employees. These seminars resulted in a number of proposals which will be implemented in future to improve environmental protection even further.

The preparations for the certification of an environment management system on the basis of the ISO guidelines 14000 and the EU eco-audit legislation will soon be completed. The certification should take place in the first half of the year 2001. In this way we wish to make our environmental protection activities even more transparent than at present.

NA has oriented its actions to the efficient utilisation of energy. Our energy-saving project eNergiA has already resulted in noticeable success. Up to now, the project teams have processed suggestions with a savings potential of about 10 %. These concepts are the result of technical improvements which can be realised at short notice. We shall reduce energy consumption at the Hamburg location by 20 %. This will achieve a significantly under-proportional trend in the energy costs compared with the production increase.

As a leading company in environmental protection, NA advocates high environmental standards all along the value-added chain of copper. This also includes copper ore mining. NA is therefore supporting improvements at the Ok Tedi copper mine in Papua New Guinea taking into account the social, ecological and economic aspects.

Management Report

Human resources

Motivated and performance-oriented employees, who are committed to NA and its targets, are the most important success factor for the profitability of our Company.

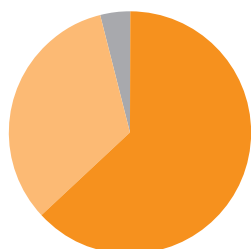
Trend in personnel in the NA Group

Number (annual average)	99 00	98 99
NA	1,973	2,015
HK	674	
SPIESS-URANIA Chemicals*	242	99
Deutsche Giessdraht	119	
CABLO	67	64
MicroMet	67	
PEUTE BAUSTOFF	12	12
Total	3,154	2,190

*Until 30.9.1999 URANIA

Employees' structure in the NA Group

Number (average) over the business year 1999/2000 (in %)



- Apprentices 4%
- Salaried 33%
- Hourly-paid 63%

One of the Personnel Department's main tasks is to ensure the recruitment of a qualified and dedicated staff in all sectors of the Company. This includes giving staff the opportunity for advancement and the reconciliation of interests between the Company and its staff.

Targeted remuneration system

An extensive offer of further training measures and a performance-oriented and success-related remuneration system characterise NA as a modern employer: our employees' income will in future be composed of three variable elements in addition to a fixed amount. These elements will depend on personal performance, the team's success and the Company's performance.

Number of employees

The number of employees in the NA Group – including apprentices – has increased on an annual average by 964 employees to 3,154. This rise results from the inclusion for the first time of SPIESS-URANIA Chemicals GmbH, Deutsche Giessdraht (since 1 October 1999) as well as Hüttenwerke Kayser (since 1 January 2000). On 30 September 2000 there were 3,223 employees

(previous year 2,206) in the Group – including apprentices. The employees' structure has not changed as a result of the consolidation. The Group consists to about 1/3 of salaried employees and to almost 2/3 of wage earners.

NA AG has the largest number of employees in the Group. The number has dropped on an annual average by 42, from 2,015 to 1,973. The decline resulted from the spin-off of the Copper Salt and Metal Powder Sectors. In the course of the business year, however, it was made up again by new hirings due to increases in production and turnover. At the end of the business year the workforce consisted of 2,037 employees (previous year 2,035).

A high level of further education and training

Staff training and advancement are essential functions of ours and awarded the highest priority. We shall likewise extend this strategy to the meanwhile significantly enlarged NA Group.

NA AG has increased its training capacity as of 1 September 2000 by more than 20% and with an apprentice and trainee share of 6.2% is the largest training company in Hamburg's chemical industry. With this increase we are documenting the responsibility we feel for young people and are, at the same time, safeguarding the future of our Company.

Priority is also given to the further training of our employees: in the business year 1,603 employees (81%) of NA AG attended special training courses; an increase of 20 % in comparison with the previous year.

Company suggestion scheme effectively used

Within the framework of the suggestion scheme of NA AG, our employees submitted 592 suggestions for improvements and, in so doing, used their creativity and experience in the interests of increasing efficiency further. The 83 suggestions referring to the eNergiA project should be specially mentioned here since they have resulted in further reductions in energy consumption.

Stock option plan for senior staff

Again almost all the senior staff subscribed to the third tranche of the performance-oriented stock option plan issued in spring 2000. This is further evidence of the confidence the senior staff have in the Company's success.

Occupational safety at an exemplary level

In the NA Group great priority is given to constantly improving occupational safety. As a result it was possible to reduce again substantially the accident frequency at NA AG in the last business year. The proportion of notifiable accidents has significantly been reduced by 20 % to 13 per 1 million hours worked and is thus better than the average in the industry. This success is attributable particularly to increased aware-

ness of occupational safety amongst all employees and senior staff as well as to the established health discussion groups.

Collective agreement 2000

In spring 2000 the collective bargaining for the chemical industry resulted in an extensive package effective for a longer period than usual. The two-stage tariff increase, which in the first stage includes an increase of 2.2 % as of 1 July 2000 and in the second stage an increase of 2 % as of 1 July 2001, has a lifetime until the end of March 2002. Thus, the collective agreement has created a reliable basis extending beyond the current business year as regards budgeting personnel expenses.

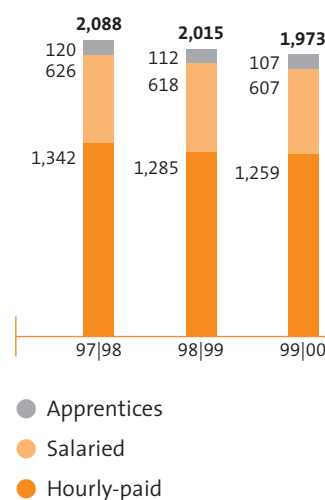
Early retirement scheme

On average 103 employees at NA AG, aged 55 and over, took advantage of that part of the collective agreement for the chemical industry which permits early retirement of up to 2 ½ years whilst receiving 85 % of the former gross remuneration after working full-time for this reduced remuneration for the same number of years. The number in the NA Group amounted to 157 employees.

Thanks to the staff

Our thanks go to all our staff for their enormous dedication and outstanding commitment. They have made a decisive contribution to the Group's success in the business year. Particular thanks go to those who were included due to the growth of the NA Group and have supported the integration process.

Number (average) of employees in NA AG



Management Report

Risk management

In 1998 NA had already set up a project group with the aim of ensuring integrated risk management.

In view of the legislation on controlling and transparency in the corporate sector (KonTraG), Norddeutsche Affinerie has analysed in detail the existing early warning systems for risk management and combined them in a closed risk management system. These measures are documented in a manual which is available for inspection.

We differentiate between risks which can impair the achievement of operative and strategic corporate targets, as well as between additional risks which are of particular importance for the NA Group. The risks are evaluated qualitatively and – if possible – quantitatively as regards their impact on NA.

Group planning process

Comprehensive risk principles and guidelines govern the risk management and its organisational integration in the NA Group's corporate processes. Considerable parts of the entrepreneurial actions are carried out by subsidiaries and NA's business units on their own responsibility. They are therefore individually responsible for risk management. The operative business units are supported, coordinated and controlled throughout the company by the administrative and service departments.

The risk management refers to all corporate sectors and is part of the Group planning process. This includes the sales and production plan as well as the personnel, investment and finance plan. The plans covering several years are updated each year; the plan is monitored monthly. The implementation of the strategic plan is examined each year and, if necessary, adjusted to any changing company targets.

Limitation of risks

In the copper and precious metal sectors, NA, as an internationally active company, is confronted with the additional risks of metal trading and foreign exchange dealings apart from the customary business risks. To limit these risks, there are separate guidelines to prevent, limit and ward off negative impacts on the company from these sectors in addition to the supply agreements, which are spread worldwide and have staggered delivery times.

Hedging activities are carried out, which balance each of NA's transactions with countertrade, in order to minimise the impacts metal price and currency rate changes will have on results. These are performed by balancing possibly open trading positions each day.

The organisational implementation and observance of these directives is ensured by a hierarchically graded system of management circles with the inclusion of the Executive Board. The management circles meet regularly and by means of dif-

ferent information sources observe market developments and NA's position. The integration of risk management in the corporate processes is ensured by the attendance of the responsible employees from the respective departments.

The management circle participants come from different hierarchy levels so that information is given directly and decisions put into action.

Prerequisites fulfilled

The risk management system was developed in collaboration with the responsible employees. It is constantly updated and adjusted to the changing conditions in the company. In compliance with the statutory directives, our risk management system came for the first time under the scrutiny of the auditors in the year under review. They determined that the Executive Board had taken the steps required under Section 91 § 2 Commercial Code in a suitable manner and that the monitoring system fulfilled the prerequisites for this.

Management Report

Outlook

At the beginning of the new century NA is very well positioned for the future: significant capital expenditure has been or is being directed into internal and external growth and a clear growth strategy has been defined for the future.

For the current business year 2000/2001 we expect a sustained stable economic climate. The member states of the European Union can reckon with an increase in industrial production of 2.9%. According to the EU Commission, even with high oil prices and possibly a continued weak Euro, economic growth in the EU will remain at about 3% in the next few years.

Rising overall demand

Due to the – in our experience – close correlation of the general economic growth with the growth on the copper markets, we are expecting very positive trends as well for our copper-related markets. This estimate is supported by forecasts given by independent experts, who are assuming a significantly rising trend lasting several years in view of the copper prices and

quantities to be expected. Strong stimulus for overall demand can accordingly be expected in the next few years, not only from the economies in Asia, but also from the established markets in Europe and NAFTA.

The utilisation of our expanded smelter capacities is almost completely assured by long-term supply agreements for copper concentrates. We are expecting the level of the treatment and refining charges (TC/RCs) contracted in US\$ to be stable compared with 1999/2000.

The resulting US\$ revenues for the current business year have almost all been rate-hedged.

On the assumption that the good economic development within our customer industries and their countries will be sustained, we are expecting continuing high production and sales figures for continuous cast wire rod and shapes.

Our strong position in the sector of oxygen-free copper materials will ensure an even larger share of the telecommunications growth market.

Reliable partner

Due to the increasing demand for copper, in particular in the electrical engineering and electronics industries, our products will participate overproportionally in the general growth. NA's clear strategy of continued investment in the material copper, also in future, makes the company a reliable long-term partner for the European wire and cable industry as well as for semis fabricators.

Our optimism is based on our assumption that our main raw material suppliers – the copper mines – will produce more material for the globally rising demand and will be dependent on smelter capacities, such as those at NA.

Utilise opportunities – minimise risks

We shall use the positive trend on the copper market emphatically to continue our company strategy of growth and increased profitability.

Possible risks on the cost side could result from continued excessive crude oil prices and tougher pressure from inflation.

As in the past, we shall react determinedly to combat all cost burdens effectively with greater efficiency and tighter cost management.

For the business year 2000/2001 we are assuming a further increase in profits, both for NA AG and for the Group.

With its position in the centre of the value added chain for copper, NA has the best prerequisites for proactively absorbing the positive stimulus of its neighbouring links in the chain, i.e. the mines and NA's product users, and to utilise this to increase its company value.