

2003 Ankh Awards

Arthur R. Miele and Andronico Luksic - Copper Men of the Year 2003

While Arthur R. Miele had no intention to make his career in the copper industry prior to joining Phelps Dodge Corp's international division, he has since worked in just about every phase of the copper industry and has been very active promoting red metals through various international copper trade associations.

So it is not surprising that this year the Copper Club chose to honor him, as well as Andronico Luksic, chairman of Chile's Antofagasta Plc., with their prestigious Ankh Award for outstanding individual achievements in and contributions to the copper industry June 18 at their annual meeting in the Waldorf-Astoria Hotel in New York. The first Ankh award, also known as the Copper Man of the Year award, was presented in 1962 to Clyde E. Weed, then chairman of Anaconda Co.

"Arthur Miele has been Mr. Copper just about all of his life," Tom Kennedy, chairman and president of the Copper Club, declared, noting that he has been instrumental in promoting new applications for the red metal. "He has done a good job for the entire copper industry," he observed.

"I have a little bit of a unique background for the copper industry, in that I have served in almost all of the sectors - producer, fabricator, manufacturer and most recent on the board of the London Metal Exchange and on the financial side," Miele said, adding that he hadn't planned to be part of the copper industry until he interviewed with Phelps Dodge in 1967, where he remains as vice president of marketing and president of Phelps Dodge Sales Co.

But he said he is very glad that he did choose to be part of the copper industry. "You have to be very optimistic about the copper industry when you consider what copper is. It is a building block for economies where standards of living are growing, where people are buying or upgrading houses, where they are buying automobiles, televisions and other appliances, where significant telecommunications networks are being built, where companies are building plants and adding equipment and where governments are putting in an infrastructure. Leaving aside cycles, because cycles are normal, when you look at places like China, Eastern Europe and even Russia plus naturally growing U.S. and European markets, copper is in excellent shape for both traditional markets and some higher tech markets," Miele declared. He added, "I think everyone will be surprised at the underlying strength in the market once we get through this cyclical downturn and demand in the United States, Europe and Japan is normalized."

Likewise, there are certain new applications emerging for red metals. One of the biggest growth areas, Miele predicts, comes straight out of traditional markets with more wiring used for such things as smart houses and smart cars, as well as anything and everything associated with energy efficiency. "As we progress worldwide toward more energy efficient materials, copper usage can grow as much as 25 to 40 percent. Also new technologies related to the computer are very friendly to copper."

Miele said that prior to joining Phelps Dodge his interest was to get into the international side of business - to run an operation overseas, and was interviewing with a number of companies, primarily in the pharmaceuticals industry to that end. In fact, he only interviewed with Phelps Dodge's international division at the urging of a recruiter who told him that the copper company was just what he was looking for as it was involved in developing new businesses overseas and had very much an international team. "So I visited them. The president was Danish; the senior management was made up of one American, an Egyptian, a Frenchman and a Cuban. It was indeed very much what I was looking for," Miele said.



Arthur R. Miele

Initially he took a position in business development, which the company explained was the training ground for a cadre of people they wanted to send overseas to manage their international businesses, which at that time were almost all joint ventures.

He remained in business development there for about five years and during that time was involved in the establishment of a number of interesting new international businesses. "The first transaction I was involved in was buying a manufacturing business in Chile, so I was involved in setting up a business in Chile long before we were in the mining business there," Miele declared, noting that he was also involved in a number of projects in Brazil and Venezuela and even one in Iran. "We did a feasibility study in the late 1960s there, set up an operation in the early 1970s only to give it up to the Ayatollah Khomeini in the late 1970s.

Afterwards, as promised, he was sent overseas, first to Puerto Rico and then to Venezuela to run Phelps Dodge's South American manufacturing operations. Later he headed the company's Asian operation and later, when Asian and Latin American manufacturing operations were put together into one business unit, he headed that business.

Then, 1987, Miele moved over to the producer side of Phelps Dodge's business, where he has worked since then. He was named vice president of marketing for Phelps Dodge Corp. and president of Phelps Dodge Sales Co. in 1988, and in 1995 he was elected to the additional positions of president of Phelps Dodge Refining Corp. and president of Phelps Dodge Copper Products Co.

Through the years, Miele said he has seen several significant changes in the copper industry. When he started in the business, far more copper producers, including Phelps Dodge, were fully integrated, offering services from mine to market, "but today the industry is much more nonintegrated. In fact only about 4 percent of the industry is totally integrated and about 40 percent is partially integrated, while the rest is separated" with mining companies being separate from smelters and refiners who are separate from such downstream operations as fabricators and manufacturers.

"This has resulted in a number of significant challenges because in a nonintegrated industry you are separated from your end-use customers by a number of layers. The management team of producer companies are not close to either their end-use customers or even intermediate customers (fabricators and manufacturers) so the things that you become sensitized to, if you are not careful, are heavily on the commercial or customer side," Miele observed. Meanwhile Phelps Dodge, he maintained, continues to be very integrated with significant holdings in downstream products. "We have a strong customer orientation. We believe in being close to our customers and our customers' customers. This really allows us to stay close to the end-use markets and understand the trends in the industry and what we as a company and as an industry need to do to compete."

Another significant change, Miele said, has been a geographical shift for both the production and consumption of copper. In terms of production, there has been a tremendous growth of copper mining activity in South America - including in Chile, which now represents somewhere between 35 and 40 percent of total copper output, Peru and Argentina - while U.S. mine capacity has shrunk in light of a number of closures, the most significant of which being the Magma operations in the southwest. However, Miele said that while there continues to be greenfield and brownfield opportunities in South America, growth there would likely be less pronounced than in the past decade. The North American mines operating today are very competitive world-class operations, he said, and there will likely be more mine development on that continent as well. Other regions where mine development could occur, Miele said, are Africa and Russia, but that will depend on such factors as political stability, return on investment and risk profile.

There has also been a shift in red metal consumption patterns, with growth in developing countries, especially China, outpacing that in many developed countries. Miele noted that China's consumption of copper cathode last year was almost as strong as that in the United States - about 2.5 million tonnes - and it is predicted that China's consumption levels will exceed the United States' this year.

At the same time, many manufacturers who use copper in their products are moving their

manufacturing facilities from such developed nations as the United States, Europe and Japan into such developing nations as China, Eastern Europe and Mexico. This, Miele admitted, is likely to cause certain economic disruptions in the short term until companies can adjust to this drastic shift in manufacturing pattern, but he maintained that in the long run this will be good for copper as these developed countries will experience an increase in their standard of living and copper growth is very much related to changes in standards of living.

Miele even expressed optimism that the hard times that copper companies in North America, Europe and Japan are experiencing will be shorter lived than the comparable downcycle in 1980s, predicting a modest pickup in the second half of this year followed by more rapid growth next year. "At the moment the market is fairly balanced," he said, "So it is now just a question of having demand come back and once that happens there will once again be some normalcy in the market." And that, he said, could occur fairly quickly.

And once it does future for copper, he said, will a bright one, especially with the industry constantly working to develop new applications for the red metal. While just 10 to 12 years ago the industry just spent about \$6 million a year to promote copper worldwide, currently the industry spends more than \$40 million a year in joint efforts on the part of producers, fabricators, manufacturers and in some cases the government to ensure that the red metal competes effectively against other competing materials, including aluminum and plastics. "In the future I think there will be great opportunities for copper producers and manufacturers, alike, worldwide," Miele declared.

In addition to his position with Phelps Dodge, Miele is also a member of the board of directors of the LME, chairman of the advisory committee of the International Copper Association, chairman of the executive committee of the board of directors of the Copper Club and a member of the board of directors of the European Copper Institute as well as being involved with the Copper Development Association.

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Andr nico Luksic was born in 1926 in Antofagasta, the son of Policarpo Luksic, who had emigrated to Chile in 1910 from the Island of Brac in Croatia, which then formed part of the Austro-Hungarian Empire. Policarpo arrived in Chile at the age of seventeen, settled in Antofagasta and married Elena Abaroa from a well known local family. Andr nico's close relationship with both his parents and his affinity to his roots in Brac, have been major influences throughout his life.



Andronico Luksic

After studying Law in Santiago, Andr nico left Chile in 1948 to spend time in Paris at the Sorbonne. The subject of his thesis was Economic Neo-Liberalism, which extolled the doctrine of Free Trade which was in vogue in Europe at that time. In Paris he studied, travelled and worked in a Money Exchange, where he made enough capital to buy a 10 per cent stake in the Ford Agency in Antofagasta. The Cold War in Europe had intensified and his decision to return at that time was opportune, as on a visit to Croatia, he only just avoided military service in Yugoslavia by presenting his Chilean passport.

On returning to Antofagasta, he worked for a time in a Lawyer's office, was passed over for promotion, and decided to leave aged 25, to embark on a business career. While working at the Ford Agency, he was approached by a Frenchman who wanted to sell his 25 per cent share in a copper mine a few miles along the coast. Andr nico, whose money was tied up in the Agency, agreed to buy the stake on monthly instalments over twenty five years.

It was not long before he had bought out the other shareholders, and thus began his lifelong fascination for geology and mining. After two years, in 1954, he fortuitously sold the mine to a Japanese company for US\$500,000 - an enormous amount at the time. A combination of audacity, hard work and luck, to which he has attributed much of his success in later years, had brought

Andr nico Luksic his first business success; providing capital to expand and encouraging him to develop his mining interests in the region.

In 1954, he decided to consolidate these interests and founded the Luksic Group. The Group continued to develop its mining interests and in the 1960's diversified into other industries such as fishing, coal mining, metal processing, electricity supply, manufacturing, food processing and forestry. During this period, the Group gained control of many companies including the Lota Schwager coal-mines and Madeco, the major copper wire and tube manufacturer in Chile.

The advent of the Unidad Popular Government of President Allende in 1970 marked the beginning of a period of expansion outside Chile. Opportunities in other countries in Latin America were evaluated but Argentina was chosen as the main target for investment. Based on its experience gained in Antofagasta, the Group acquired the Ford distributorship in the Salta region as well as the distribution of Ford tractors in Tucuman and Rosario. The Salta Brewery was acquired as well as several agricultural estates in that province. Later, Luksic Group executives travelled to Brasil to open a Ford Agency and an iron-ore mine and to Colombia to establish a packaging company.

In 1974, the Luksic Group re-activated the Chilean investments which had survived the economic constraints imposed by the U.P. Government and the military regime which followed.

In 1980 the Group acquired control of the Antofagasta & Bolivia Railway Company, which had been listed in London since 1888. The railway rapidly became profitable as management was revitalised and costs reduced. The cash generated allowed the Group to invest in the mining, financial and industrial sectors in Chile. Using Antofagasta as a vehicle, the Group increased its mining interests through a series of acquisitions and expansions. In 1996, Antofagasta decided to consolidate all its non-core banking and industrial interests into Qui enco in order to focus on mining and transportation. In addition to the Michilla mine, which dates back to 1983 and currently produces 50,000 tonnes of copper cathodes per year, two major mining projects Los Pelambres (60%) and El Tesoro (61%) were to follow:

Los Pelambres, a porphyry copper deposit with reserves of over 1.4 billion tonnes of 0.70% copper with a thirty year mine plan, which was originally purchased from Atlantic Richfield (ARCO) in 1986 for US\$6.2 million and in 2002, produced 325,000 tonnes of payable copper with cash costs of under 35 cents per pound and an operating profit of US\$ 165.9 million and El Tesoro which is a low cost cathode producer using a standard heap-leach SX-EW process with total reserves of 178 million tonnes of 0.81 per cent copper and a projected mine life of 21 years and produced 85,000 tonnes of payable copper in 2002 with cash costs of 40.8 cents per pound and an operating profit of US\$ 36.4 million.

The successful development of Los Pelambres and El Tesoro at a total cost of US\$1.7 billion has propelled Antofagasta into the major league of world copper producers with total Group production of 460,700 tonnes of payable copper in 2002 with weighted average cash costs of under 39 cents per pound, placing it in the lowest cost quartile worldwide.

In 2003, Antofagasta, which is an important constituent of the UK's top 350 companies' index, had a market capitalisation of US\$1.9 billion compared to US\$3 million in 1980.

Andr nico Luksic's unique vision and even more his ability to turn vision into reality, has been demonstrated by the phenomenal growth of Antofagasta's mining interests. Qui enco's broadly based investments in Chile, spanning banks to breweries and hotels to telecommunications, also bear testimony to his total dedication to the success of the Luksic Group.