

THE ALUMINIUM INDUSTRY IN THE 1990's AND BEYOND

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1988 marks a number of important anniversaries. The most conspicuous of course is the Bicentennial Anniversary of permanent European settlement in Australia. It is also the 100th Anniversary of the 1888 discovery by an Austrian chemist, Karl Bayer, that aluminium oxide would dissolve in a solution of hot caustic soda. The Bayer process is still the single most economic method of refining alumina from bauxite around the world. And perhaps coincidentally it is the 100th Anniversary of the Aluminum Company of America, the 51 percent shareholder in Alcoa of Australia and the original source of technology used in Alcoa's alumina refineries and aluminium smelters.

Closer to home, this year is the 25th Anniversary of the first commercial production of bauxite in Western Australia, which occurred at Jarrahdale on July 29, 1963. And it is the 25th Anniversary of the start up at Kwinana on November 5, of Western Australia's first alumina refinery.

The reason we have all gathered here however, is not to dwell on past achievements, we are here because Australia is a major player in the world alumina industry, and a significant force in the metal industry.

We are here because of the changes taking place in our business and the recognition of the difficulties we will face in the next decade keeping our business cost competitive and maintaining the growth we need to stay viable. The growth in the Australian aluminium industry since the early 1970's has been quite phenomenal. In 1970 for instance, exports from the Australian aluminium industry accounted for some 2.5 percent of the country's total exports. At the end of this year (1988) it is expected that our industry will account for almost 10 percent of export earnings.

The drive during the seventies came from alumina, with the key to the growth being the cost competitiveness of Australian producers. Modern technology, economies of scale, and access to economic resources have placed Australia's six alumina refineries among the 10 most cost competitive alumina producers in the world.

Australia is the world's largest alumina producer, supplying some 30 percent of the Western World's total production, and as long as we maintain our cost competitiveness we should continue to enjoy growth in this area.

The major trends to emerge in the supply side of the aluminium industry in the past decade have been the shift in production to low cost developing countries and the decline in the growth rate for aluminium production subsequent to the 1970's oil crisis.

Until the first oil shock, production capacity was concentrated in industrialised countries which were primary end users, such as the United States, Europe and Japan.

As the shock waves of the oil crisis hit, investment shifted towards lower cost production capacity located closer to raw materials with access to cheaper energy. The early 1980's saw an acceleration in this shift with major capacity additions here in Australia and developing countries such as Venezuela coming on stream.

And by a second oil crisis in 1979, capacity from low cost operations and flat demand, the aluminium industry suffered a severe setback, with Japan being the most visible casualty, knocking out more than one million tonnes capacity from 1980. European production was also affected, while the US industry was hit by the strength of its own dollar, this was offset to some extent by its ability to reduce its energy costs.

With a reduction in capacity brought about by the plant shutdowns in the mid 1980's and falling inventories, the stage was set for a recovery in the price of the metal.

It would be hard to argue that we are not enjoying a strong and sustained rally in our metal business, however we face considerable capacity coming on stream and also the re-activation of the Lazareth Smelters in the States. There are also a significant number of new projects planned.

In the long term Venezuela has targeted an annual capacity of 1 million tonnes by 1992, and 2 million tonnes by the end of the century.

There are smelter proposals for Canada, India, Australia, and the United Arab Emirates whose capacity would far exceed that of the proposed closure of the European smelters.

There have been three major features in the aluminium industry in the past decade. They are:

1. A slower growth in the use of aluminium in mature economies.
2. The emergence of developing countries as strong growth markets for aluminium consumption.
3. The rapid growth in the consumption of secondary aluminium.

The consumption of aluminium in mature economies is dominated by transport - 26%, construction - 23%, and packaging - 20%. The packaging sector has expanded the most rapidly with a growth rate of around 3.5%. State of the art can lines are currently consuming 10,000 tonnes of metal to produce around 500 million cans per annum. These figures are the result of improved efficiencies in manning and production. The market for this rapid growth in can production is most easily demonstrated by the per capita consumption in the US, which stands at one can per person per day.

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In the secondary market, scrap recovery has grown at three times the rate of primary aluminium consumption and now represents around 30% of total aluminium production. Australia and the US have the highest recycling rate for the aluminium can industry in the world with a recovery rate of around 50%. Recycling rates in Japan have been growing steadily and now figure at around 40%. Europe and the United Kingdom have traditionally been dominated by the steel can for the beverage market where manufacturers have enjoyed production incentives for the steel can. However, the cost benefits in recycling the aluminium can which require no subsidy schemes to make it attractive to consumers are having a significant effect on sales growth. Quite obviously these two markets will present the Aluminium industry with considerable opportunities in the immediate future.

The growth in the packaging market, particularly the aluminium can, will have a significant effect on the secondary market in the next decade.

While the USA, Japan and Europe account for some 60% of all aluminium use, it is the newly industrialised countries such as Taiwan and Korea which have pushed demand and growth since the early 1980's.

The next decade will be a vital one for our industry. There is no doubt in my mind we will see real growth, but I don't think we should expect growth alone to underpin our industry.

The agenda for those companies serious about their role in the future of the industry is one in which new emphasis is placed on the supply of Quality Aluminas to smelters needing to penetrate new markets. The new high technology applications in metal, chemical, aerospace and paper industries demand critical quality. The threat of substitution must be met with thinner, lighter, stronger products which will demand the highest quality raw materials.

Alongside this commitment to quality material supply is the qualitative commitment we make in the ways in which we do our jobs. There are a number of ways to describe the way in which we can do a good job, but the one I like is Total Quality Management. That describes best to me the attitude I have experienced when moving about the various plants we operate. The people I have talked to are all very aware of the demand for not only quality supply, quality control, but quality management. These are the people who will carry our industry into the next decade with confidence about their future, because they have recognised the challenges that supplying a volatile industry sets, and they have been prepared to meet them and set their own standard for others to follow.

Over the next ten years in the Asian region we shall see some significant changes. In North Asia, Japan, Taiwan and Korea will spend more money improving their standard of living. This will increase aluminium consumption in packaging, building, renovation and transportation.

In South East Asia, incomes in Indonesia, Thailand and India will grow, and so will the demand for aluminium in the forms of basic shelter, packaging and cookwear. There will also be a significant increase in the demand for alumina chemicals such as hydrate for water treatment. At the end of the next decade countries such as China and Vietnam will be opening their economies further stimulating demand for more basic applications of aluminium.

In looking to the future of our industry, we need only to examine the consumption figures of major western world countries and compare them to the lesser developed countries to see where our path lies.

On a Sector and by country basis the consumption per capita in kilograms is:

Country	Packaging	Transport	Construction	Total
EUROPE (Germany, UK, Italy, France)	2	4	3	12 kg
JAPAN	3	7	7	25 kg
USA	8	6	7	31 kg

"WHAT ABOUT RUSSIA?"

The consumption figures in the newly industrialised countries, however, are already around European levels and still growing.

LESSER DEVELOPED COUNTRIES

China, India, Indonesia 1 kg

The challenge for the 1990's is to penetrate these markets, exploit new technological driven opportunities and to have made the long term decisions which keep our industry cost competitive.

In establishing these markets it is clear that we will need to work closely with the governments of developing countries involved in the basics of our industry. This may take the form of joint venture operations, or involve the local government in the upstream supply end of the raw materials and energy.

With a bright future in front of us in the 1990's, and considering all the natural attributes of aluminium - its extreme lightness, its reflective qualities, its high strength and conductivity - we still have to remember that our favourite metal is considered a basic commodity, priced every day on the LME; which means all of us must be diligent in pursuing *costs and quality* to ensure we have a profitable industry both in the good and down markets.