



High flying optimism

While some companies in the global aluminium industry straddle a parallel universe of depressed metal prices, soaring energy costs and smelter closures, Kaiser Aluminum's strategy positions it to avoid these woes and achieve success in good economic times and bad. Jack Hockema, CEO of California-based Kaiser, doesn't do pessimism.

By Matthew Moggridge*

"Hello darkness, my old friend," I sing to myself from room 508 of the Hyatt Regency in Irvine, California. It's 80 degrees and the palm trees outside my window blend with clear blue skies.

I often wonder where those carefree summers of my youth have gone and now I know: they're alive and well and living in California. I'm full of Simon & Garfunkel and the Beach Boys as I await my cab to Foothill Ranch, base of Jack Hockema, Kaiser Aluminum's CEO.

Kaiser is experiencing an eternal summer all of its own. The company is feeling the love of success and is extremely bullish about its prospects going forward, particularly in its two key markets: aerospace and automotive.

The last thing on Jack's mind is bankruptcy, but then I open my big mouth.



"You had to start with that, huh?"

Kaiser is a classic 'rags-to-riches' story. It emerged from bankruptcy in 2006 and has worked hard towards 2012 net profits of \$86 million – up from \$25 million in 2011.

"Well, part of the story is the bankruptcy," says Jack, relating how he worked for Kaiser in the late seventies/early eighties and returned in the mid-90s. He started with the extrusion business, then took over the flat-rolled division and between 1997 and 2001 worked hard on

restructuring and repositioning the company, taking it back to the foundations and transforming it into the successful fabricated products business it is today.

Appointed CEO in 2001, Jack successfully steered Kaiser through a turbulent four-and-a-half-year bankruptcy, divesting the company's upstream operations and clearing out what he describes as 'a whole bunch of liabilities that were a big drag on the company'.

From mid-2006, having taken the

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"In the past they would buy extrusions, sheet, plate, forgings and machine those into parts that they would then assemble into components," Jack explains.

They both realised, however, that it was far more cost-efficient to buy a big piece of plate – bigger than Kaiser's boardroom table at which Jack and I are seated – and then machine the plate into the final component rather than assembling individually machined parts.

"They throw away a lot of chips, so there's inefficiency from that standpoint, but that's more than offset by the great efficiencies they get. It's just one machining operation rather than a bunch of separate machining and forming operations and they eliminate the assembly so they save costs even if they are throwing away a lot of chips," Jack says.

Scrap, which can be infinitely recycled, is sold in the marketplace and Kaiser is a buyer as are others.

With monolithic design, aircraft manufacturers have just one homogenous piece of metal with no fasteners or stress risers, says Jack. "They can make a lighter weight part that goes on the plane so they're going to benefit from weight and fuel savings."

The first thing to consider is that the new 747-8 is manufactured using monolithic design techniques, unlike its predecessors, the 747 and the 747-400. The new 747-8 is just 15ft longer, but it uses three times as much aluminium plate

capacity for capital-intensive melting, casting and hot rolling.

While Kaiser's competitors were unable to expand any more than about 25%, Kaiser installed heat treat furnaces and other downstream equipment and utilised former open capacity it had upstream.

"We more than doubled our capacity for aluminium plate and were able to enjoy significant growth compared with the rest of the group," says Jack.

Between 2004 and 2008 there was a shortage of plate partly because there were only a handful of suppliers, but also because Boeing and Airbus switched to monolithic design during the US economic recession of 2002 when demand was low and nobody noticed.

"There was plenty of capacity, but then in 2004 when build rates started to ramp up again, suddenly all of us were out of capacity and wondering what had happened. What happened was monolithic and that's when we all started scrambling to expand," Jack says, explaining how it took four years to catch up with demand.

Kaiser increased its 2005 heat treat plate capacity 2.2 times from 2007 to 2009 through development phases 'one through three'. Towards the end of 2012 the company completed phase four development, adding 5-10% more capacity at a cost of \$21 million. "We've already envisioned phases five, six and seven and are looking down the road to be able to grow as demand continues," he says.

Each development phase will cost in the region of \$20 to \$30 million and will bump up capacity by 5-10%.

Aerospace manufacturers are presiding over an eight-year waiting list for their aircraft, despite a record build year in 2012 and this is great cause for optimism at Kaiser.

Boeing and Airbus continue to 'ramp up their builds' and are working frantically to reduce the backlog because, says Jack, it's affecting their duopoly now that Bombardier's C-series is moving into the 100+ seats market. "The airlines are looking for other aircraft that can shorten these lead times," he says.

You might think that the carbon fibre content of Boeing's 767 Dreamliner sends shivers up Jack's spine. It doesn't because, while the currently grounded airliner's airframe is only 20% metallic, it's aluminium plate content is 60% greater than the pre-monolithic 767. "So even though carbon fibre has a significant impact on the 787, there is still huge demand for aluminium plate," says Jack.

Furthermore, Boeing is reportedly close to approving the new design of its 777 aircraft and Jack is optimistic that it will have an all-metallic airframe.

this, says Jack, has created a big step change in demand.

Then consider that the plate supplier base is not huge. According to Jack there are only four notable players in the market: Alcoa, Aleris, Constellium (formerly Pechiney) and Kaiser.

Kaiser manufactures plate at its Trentwood facility in Spokane, Washington; Alcoa has two plants, the main one in Davenport, Iowa; Aleris owns Koblenz (a former Kaiser facility) and Constellium has its Isoire factory in France and another former Kaiser plant in Ravenswood, West Virginia.

With the exception of Kaiser's Trentwood plant, the other facilities were running close to capacity when Boeing and Airbus switched to monolithic design. Kaiser, having exited can stock and common alloy sheet, had plenty of open

business back to the brickwork, Kaiser entered what Jack calls the 'growth leg'.

"And we've been in a growth mode ever since. Primarily organic growth, but also acquisition growth," he says.

Kaiser invested \$100 million in acquisitions and \$300 million in organic growth, mainly in the aerospace and automotive markets. "They've really given us a climate for strong growth and that's what's stimulated the success that we've had in the past five or six years," he says.

A key tenet of Kaiser's success has been the aerospace industry's move towards monolithic design. In the early noughties, Airbus and Boeing almost simultaneously changed their manufacturing technology.



The other new design of consequence within the next decade is the Airbus A350, which has more carbon fibre than traditional metallic airframes, but not nearly as much as the 787. "So, basically, we can look out for the next 10 to 15 years and we know what the mix will be, it's already baked in, and the 787 will be the only predominantly carbon fibre air frame for commercial use for the next 10 or 15 years," he says.

Increasing fuel costs are behind both the aerospace and automotive industries' desire for more aluminium. Back in the late seventies the cost of jet fuel in the USA was around 50 cents per gallon. It spiked up to \$3 per gallon in the mid-noughties and today represents 30% of an airline's operating costs.

"That's what's driving them to fuel efficiency and they're actually retiring aircraft before the end of their natural lives because they need to get more fuel-efficient aircraft and that's what's partially driving the backlog," explained Jack.

The other big driver is passenger revenue miles, which have more than doubled since the beginning of the new millennium and are set to do so again by 2030. "North America and Europe are mature, but there's so much travel within the growing economies in the rest of the world and it is these miles that are driving demand for more airframes," Jack says.

For Kaiser, it's a perfect situation and the company is 'really optimistic' about the aerospace industry over the next three decades.

Where automotive is concerned, Kaiser is focused on extrusions and claims to be the premier extruder in North America and possibly the world. Over the period from 2000 to 2012, based on value-added revenue per vehicle built in North America – and bearing in mind that Kaiser passes on the cost of the metal to its customers – the company has experienced a compound annual growth rate of 7% –

double the industry rate and validation, says Jack, that Kaiser is a premier supplier.

"We only do what I characterise as demanding applications. We take the very tough products where they need engineering. We have a very strong office in Detroit and we get the first call from GM or Ford when they're contemplating a new model and are looking at what parts they're going to convert to aluminium. Even though we're extrusions, they'll talk to us about whether it should be forgings or castings, sheet or plate or extrusions and we'll tell them," says Jack.

He says that Kaiser is closely involved in the initial design process and gets the first call on which parts it wants to produce. The company has what Jack calls a premier facility in London, Ontario, and is expanding its automotive capacity transferring some production from London to its world class extrusion plant in Kalamazoo, Michigan, that, he says, gives Kaiser a second premier facility to meet growing automotive demand.

"We have tremendous manufacturing, engineering and research capabilities and we have people who know the automotive business," he adds.

With net North American vehicle imports declining and exports showing steady growth, Kaiser views its home turf as the place to be over the next decade "We think it's a tremendous market in terms of builds and that's not even getting

to the content story," said Jack.

Most vehicle exports are from Mexico going to South America and the Middle East, but as the Middle East gears up, that may reduce export demand from Mexico, according to Jack.

In 2000, net imports were almost 4 million vehicles, but that will halve to 2 million by 2015.

Kaiser sees aluminium extrusion content continuing to grow at a 5% compound growth rate while and the projected growth for sheet is 14% with the latter being the 'big beneficiary' for body-in-white.

"Alcoa and Novelis have already announced expansions here, accommodating growth in body sheet, and we see that as explosive growth going forward. We're more bullish about automotive in North America, frankly, than we are about aerospace and we're very bullish about aerospace," he says.

Where its own products are concerned, most of Kaiser's export capacity is for aerospace and related to parts Boeing and Airbus are manufacturing offshore and assembling in the USA. "We're primarily North America other than what we're shipping for aerospace use," said Jack.

When it comes to manufacturing, Kaiser is 100% North American. "We look at China and Western Europe frequently. We've not gone there, but looking at Kaiser five to 10 years from now I'll be shocked if we're not international again," says Jack.

"Some folks think it's sexy to say they're global," he says. "But we look at it more pragmatically. We've been global and it makes your business a lot more complex."

Kaiser is still sitting on close to \$800 million of net operating losses that shelter its US income. Investments in the US, therefore, will have more benefit over the next two years.

The key message from Kaiser Aluminum is summed up in one word: optimism. ■

