Hugo Goetze - Proudest moments.

One of my proudest working moments occurred in Taiwan during one of my many tours I made through SE Asia over about 15 years, giving engineering support to the Alcoa Sales team based in Hong Kong and their local agents. Eventually, we were selling to Can making companies in South Korea, Taiwan, China, Hong Kong, Singapore, KL, Bangkok, Jakarta, and Saudi Arabia. I was the engineer in the Marketing Dept in Alcoa's Melbourne office.

In Taiwan, a newly formed Co. had purchased 2nd hand equipment from the US to make 2 piece aluminium cans of 1 litre capacity for the local Taiwanese market.

They were frustrated in not getting any of the 5 body makers working properly in their 1st week of commissioning. The can bodies were tearing apart in the body making machines. Was this a metal quality problem?

A body making m/c is a horizontal long travel press making a redraw, 3 stages of wall thinning (ironing) and doming the base all in one action; at about 120 times a minute. If the can body is in two ironing dies at the same time, the can walls cannot withstand the additional tension.

My light bulb moment (200 W!) was the realisation that in the US these big cans are one US Quart and the US selling agents probably did not know the difference to one Litre (let alone incorrectly spell it as Liter).   A US Quart is only 946.4 ml – a mere 5.6% difference which means a 1 litre can is 15 mm taller.

After a few simple calculations on my computer model, I advised that the second wall ironing tool be moved about 12 mm away from the third ring and closer to the first ring, to allow the can body to fully clear the 2nd tool before entering the 3rd and final wall ironing tool. And hey presto, the Taiwanese staff were then very happy with their successful commissioning; and there was no problem with the 5 tonne coils of can body stock supplied by Alcoa of Aust.   A simple solution to a perplexing problem.

The US Quart is the old English wine measure in use at the time of North American early settlement.