



Centuries old institution has a solution to a 21st century problem

By **Melanie Williams***

Uses of aluminium are expanding as its advantages for recyclability and lightweighting fit the world's needs to save greenhouse gas (GHG) emissions in transport and to maximise the use of resources via a circular economy. But these advantages are being questioned by NGOs who point to aluminium's potential for adverse environmental impacts during bauxite mining and alumina refining. GHG savings from lightweighting are also set against high-energy use and GHG emissions during smelting.

As a response, consumer brands using aluminium are reacting in different ways. Some are seeking to use more recycled aluminium, whose adverse impacts are considerably lower. A dedicated brand identity for a recycled aluminium product has been created by Novelis, (evercan) to project a different and better image. It is designed to allow beverage companies to deliver soft drinks, beer and other popular beverages in a low-carbon footprint consumer package. Big consumer brands like BMW, Nespresso, Tetrapak, Jaguar Land Rover and others are trying to tackle the image problem of primary aluminium head on. They are working with the whole supply chain to put in place a best practice production standard for all organisations in the aluminium value chain. They formed the Aluminium Stewardship Initiative (ASI), which will launch a third party certification scheme in 2015. These initiatives follow the path trodden by the timber and biofuels sectors, which have both introduced sustainability schemes and promoted the use of recycled and waste material.

Key to the success of such schemes is consumer confidence that the sustainable material is passed verifiably down the supply chain to the final product. They also want to know where the material has come from and that it was produced sustainably according to the principles of the scheme. This is where the difficulties often arise, because modern commodity supply chains are long and involve transport, storage and trading operations. In the biofuels and food commodity sectors, where sustainability schemes are well established, mixing of sustainable and conventional material is the norm and the identity of the original producer is often lost. Materials can be tracked through trading and processing, but the sustainable material becomes diluted with conventional material of unknown origin. This is a disadvantage for consumer products where customers want to know what they are purchasing and that the sustainable material is not mixed with potentially undesirable material.

So how will this process work for aluminium where the supply chain is long and processing is on a large scale and will inevitably involve mixing of material?

The centuries old London Metal Exchange (LME) has a key part to play in the physical aluminium supply chain, particularly in times of over supply or scarcity. Its unique role as a market of last resort provides an invaluable service to the sector. The LME system of warrants and controlled brands means that, in effect, it already offers the assurance consumers are looking for. The warrant system assigns a unique identity to each tradeable

'lot' of aluminium or aluminium alloy stored in an LME controlled warehouse. A lot is 25 tonnes (primary aluminium) or 20 tonnes (aluminium alloy). The buyer of a lot receives the exact aluminium that corresponds to the warrant number assigned to the lot. To put it another way, the buyer receives the exact metal atoms assigned to the warrant number. Whilst the owner of the lot can change during storage, its unique identity doesn't. In addition, the producer of each lot and the country of origin are known via the LME approved brand system, which means that the identity can be traced back to the individual smelter. The LME system applies to both primary aluminium and aluminium alloy, which is mainly derived from recycled aluminium.

This ability to trace aluminium up the supply chain goes a long way to answering the consumers' desire to know that their aluminium has come from uncontroversial, low-risk and energy efficient sources. As aluminium is then processed via extruding, rolling and casting to make semi-fabricated and finished parts, it will be up to these operators to track the primary or recycled aluminium from different sources through their facilities, so they can match the information provided by the LME and other traders, about the origin of the aluminium used in the final product. This will then help unlock the potential of aluminium in a low carbon economy, to the benefit of the entire industry. ■

Contact
www.melaniewilliamsconsulting.com

*Sustainability Consultant