



Cardinal Company Relocates Jeffersonville Operation to Borden



Cardinal Aluminum Co. plans to relocate its Jeffersonville operation to Borden, a news release said. Cardinal Aluminum offers extruding, fabricating, machining, anodizing, powder coating and finishing services for its clients. The Southern Indiana operation serves as warehousing space for its Designer Mouldings division, which makes picture frame molding, fireplace products, outdoor louvered roofing and outdoor kitchen products.

The move is in process now, CFO Thomas A. Gividen said. The company has about 14 employees at its Southern Indiana operation, which is on Plank Road in the America Place business park in Jeffersonville. Borden and Jeffersonville both are in Clark County, about 20-25 minutes apart. According to the release, the Cardinal operation is moving to East Water Street in the Borden Business Park.

"Our new location in Borden is a good overall fit for our product needs and allows us future expansion opportunities," Gividen said in the release. The company will leasing the new space from Borden Business Park LLC. With 78,000 square feet, smaller than the space the company leased at America Place in Jeffersonville. But Gividen said the company will have flexibility to increase or decrease its space as needed with this move.

Cardinal Aluminum is based in Louisville and has more than 500 employee nationwide. In addition to Louisville and Southern Indiana, it also has operations in Paramount, Calif., and Portland, Ore.

Copper Pressures on Middle East Scrap Prices

Falls in LME aluminum and copper has a pressure on Middle East scrap prices during the holy month of Ramadan which was on June 18 and generally brought a slower period for business.

According to Bureau of International Recycling, activity levels are also lower in South Africa where raw material availability is sufficient and prices paid for scrap are close to what is achievable for export business. Copper and brass scrap are still being exported with or without export permits and under different tariff headings, fuelling the argument that 'no-one is benefiting' from the current International Trade Administration Commission system structure.

Elsewhere, aluminum scrap prices in



Japan have dropped by 3-5% over the last month or so in response to a weaker LME. Scrap availability remains unchanged and local secondary smelters are continuing to seek more domestic raw material.

Demand for basically all aluminum grades is 'very robust' in Mexico in light of orders from new automotive plants and their suppliers, thus offering early evidence that the country's footprint as an aluminum scrap importer 'will grow significantly'.

Iron-air Batteries : A Solution for Energy Storage

After more than 40, preparing the first prototype of a cheap, rechargeable, high energy density iron-air battery, researchers at the University of Southern California are now finishing the job of the patent-pending design of the battery. The technical characteristics of the batteries look particularly well-suited to the kind of large-scale energy storage that could accelerate the adoption of renewable energy sources.

Back in the 70's, researchers were already working on environmentally friendly rechargeable lithium-ion batteries and only recent advances in materials technology have made this technology into one of the most common, high-performing solutions for today's portable electronics. Iron compared to other materials has a few advantages it's durable, it has a great capacity to pack energy (per unit of mass), it's recyclable but most importantly it's cheap with costs around US\$1/kg (2.2 lb).

Iron-air batteries were first expected to be used for electric vehicles and military applications after the 1973 oil crisis. However, research stopped abruptly only years later, when scientists realized that iron-air batteries presented a serious limitation whenever the battery was being charged, a wasteful process of hydrolysis drained away



about half of the battery's energy. With today's technology and advanced research, University of Southern California found a solution to this problem. They learned that adding a small amount of bismuth sulfide into the battery shut down the harmful reaction and reduced the waste of energy more than tenfold, from 50 down to just 4%.

The other good characteristic cost-effective design of its iron electrode. The researchers combined iron powder with a polyethylene binder, heating the mix to obtain a "pressed-plate" electrode that is simple to make and has high specific energy. The iron-air battery is exhibiting very promising durability, with a target life of 5,000 charge-discharge cycles. Even more importantly, the batteries seem to retain good performance when they are being drained quickly at a two-hour rate of discharge, the batteries are showing a twenty-fold increase in capacity compared to commercially available electrodes.