Recycling International

Recovering precious metals from the urban mine

E-scrap – Kirstin Linnenkoper – December 24, 2019

'Approximately 350 000 mobile phones are disposed of in the US every day — that is worth US$ 200 million in gold alone,' estimates Carol Jegou, CEO of All Green Metal Recycling (AGR). Recycling International spoke with her at the recent E-waste World Expo in Frankfurt.

'For every million mobile phones that are recycled, we can recover over 16 tonnes of copper, 327kg of silver, 34kg of gold, and 15kg of palladium,' Jegou says with a firm nod. 'In fact, one tonne of printed circuit boards (PCBs) is said to contain up to 800 times more gold than a tonne of ore. But how do we get back 100% of the metals?'

Recyclers clamour to extract these valuable metals from the abundant e-scrap stream but do so 'with mixed results'. Jegou is confident her company, which processes tonnes of metal each month at its site in Charlotte, North Carolina, can make a meaningful contribution to the e-cycling sector.

What makes the difference is a patented solution specifically developed to tackle PCBs. It is able to quickly dissolve the plastics, leaving intact the gold-bearing integrated circuit chips, connectors and other precious metal-bearing components. These can be refined into 'premium quality' fractions with a guaranteed 99.9% purity. This includes gold, silver, platinum, palladium as well as copper.

'We completely avoid shredding or using harsh chemicals,' Jegou explains, adding that AGR relies instead on a water-soluble solution that can be reused and recycled unlimited times.

TIP FOR READERS: The full review of the E-waste World Expo will be featured in the first issue of 2020!