



From left: Daniela Entzian of German federation BDSV; Ross Bartley of the BIR; Hashem Al Sharif of Metals Bank, Jordan; Salam Sharif of Sharif Metals, United Arab Emirates; Torben Hansen of H.J. Hansen Recycling, Denmark; and Scott Newell III of United States-based Newell Recycling Equipment, who also is chair of the BIR Shredder Committee

BIR 2019: Lithium-ion batteries spark a burning issue for recyclers

Scrap stockpile fires are occurring around the world with volatile lithium-ion batteries being the most common cause.

May 23, 2019

Brian Taylor

A scrap metal stockpile fire in Denmark documented by closed-circuit camera footage helped portray an increasing problem in the recycling industry. The video clip of the fire at a shredder yard was shown at the Shredder Committee meeting of the Bureau of International Recycling (BIR), which held its 2019 World Recycling Convention in May in Singapore.

Torben Hansen of H.J. Hansen Recycling said the 2018 fire was likely caused by a lithium-ion battery attached to an electronic scooter that was part of a larger shredder feedstock pile. He said the fire and its aftermath resulted in an uncomfortable conversation with H.J. Hansen's insurance provider, who asked, "Don't you have your [scrap] sourcing under grip?" according to Hansen.

Shredder Committee members and BIR delegates in the audience were in wide agreement that lithium-ion batteries in the scrap stream were creating a growing and widespread fire hazard. "If you have piles of ferrous scrap in your yard, you're going to have a fire," stated Doug Kramer of Los Angeles-based Kramer Metals.

Salam Sharif of United Arab Emirates-based Sharif Metals asked whether technology providers would be able to create an automatic detection system for such batteries, but Kramer was skeptical. "It's a shielded source; you're never going to detect them," said Kramer, who added that such batteries are increasingly being used in onboard automotive communication and convenience features.

Kramer said American recyclers are keying in on "pile management" techniques. "You have to try not to have such big stockpiles," he remarked, adding that some U.S. shredding plant operators "shred to zero [stockpiled inventory] every day." Kramer said the batteries lose their combustible tendencies after they are shredded.

New York-based scrap trader Nathan Fruchter of Hartree Partners LP urged recyclers to work closely with their local fire departments. "I think ongoing dialog between recyclers and local fire departments can help cut out on-site debates that delay proper extinguishing of the fire," he stated. Fruchter said recyclers should consider hosting a "practice drill" with department personnel, noting that such drills have been common at airports for decades.

Andy Wahl of Atlanta-based TAV Holdings was among those who said foam fire suppressants should be used instead of water, providing another point of education recyclers can offer to first responders.

Such lessons are borne out in the H.J. Hansen Recycling incident, where water was the extinguishing treatment of choice by fire fighters who were even afraid to use that in large amounts because of runoff concerns. Unfortunately for Hansen, its considerable stockpile lost its value as fire burned through the entire pile for several hours.

The 2019 BIR World Recycling Convention & Exhibition was held May 19-22 at the Shangri-La Hotel in Singapore.