NAWTEC Speaker Abstract

INNOVATING THE RECOVERY AND RECYCLING OF WASTE-TO-ENERGY FERROUS METALS

Robert Middleton
American Steel Processing Company
80 Burr Road
East Northport, NY 11731
516-384-7404
robertdemet@aol.com

Most every one of the approximate 90 operating waste-to-energy facilities in North American have a ferrous metals recovery system to extract these metals from the ash stream before the ash is disposed as a waste. Recovery of this ferrous metal obviously reduces the significant landfill disposal cost and associated ash hauling cost for the facility by reducing the volume of materials being disposed. The volume of the ferrous metals stream typically ranges between 1.0 to 4.0 percent of the incoming waste volume. But for facilities which manage hundreds of thousands of materials per year, this relatively small stream of material in many facilities present such a nuisance that the operators at some plants have a penchant not to bother with it for the tenuous value they have received. The value received has been exposed to extreme variations and uncertainty due from the fragmented scrap metal markets, transportation costs, quality of the recovered product (or lack thereof), cost of recovery, and a number of other constraints and issues, some in the control of the facility operator and some not in the control of the operator. As a result, the attention given to this area is also very variable across facilities, even within the same parent company.

In the most recent times new attention is coming on this area due from market conditions again. Certain of the recycled scrap metals markets have taken a stepwise increase in the past few years. As an example the average price of shredded scrap iron in 2002 was $104 per gross ton. The average price in 2004 was $243 per gross ton. And the average price for the first 6 months of 2006 was $248 per gross ton. The reasoning is apparent why waste-to-energy facility business managers would wish to leverage the current market situation. However, most facilities continue to use perennial strategies for the recovery and marketing of these materials which have prevented the ability to take advantage of the market opportunities in the past. This presentation identifies new strategies for the recovery and marketing of waste-to-energy ferrous metals. These new strategies focus on the issues that are relevant for waste-to-energy facility operators and identify options that are consistent with the goals and values of the waste-to-energy industry and specifically to the facility operator.

This presentation will address five innovations that are being used by American Steel Processing Company to address the needs of the waste-to-energy facility operator. The innovation areas discussed in relation to metals recovery here are: regulatory assurance, environmental quality, ash residue management, market reach and access, and operational efficiency and reliability. The concluding recommendations suggest that we can leverage the metals pricing while at the same time incorporate the strategic objectives consistent for the waste-to-energy facility operator.

Robert Middleton is formally with American Ref-Fuel Company (now Covanta Energy). He was business manager of American Ref-Fuel's by-products business unit (ARCNET) and special waste services business. Robert worked with American Ref-Fuel Co. was for approximately 20 years. During that time he additionally worked in the engineering and design of the original waste-to-energy facilities, construction and start-up at the facilities, operations, and business development. Since leaving American Ref-Fuel Company, Robert Middleton has worked in a consultant role with American Steel Processing Co. He has participated in the NAWTEC conferences over the years and presented at two previous NAWTEC conferences on the subjects of metals recovery management and on ash reuse development. Robert Middleton has a Bachelor of Science Electrical Engineering and a Master of Business Administration.