

THE SEARCH FOR AN ACCURATE AND PRACTICAL MEANS FOR TESTING RESIDUE FROM COMBUSTION OF MUNICIPAL SOLID WASTE FOR PERCENT COMBUSTIBLES AND ENERGY CONTENT

ROGER S. HECKLINGER

Roy F. Weston, Inc.
Valhalla, New York

Discussion by:

John D. Eppich
HDR Engineering
Irvine, California

I wish to commend the author for summarizing the traditional test methods used on residue testing in a clear manner. In his discussion, he describes sampling problems using coal and coke ash testing methods, which are similar to those experienced in testing the solid waste itself for its fuel content.

Because of the heterogeneous nature of the fuel (and the ash), it has always been difficult to obtain respectable results from any test program that is set up to determine the heating value of refuse or its ash. The only test programs that have shown any form of consistency or repeatability have been those programs which incorporated an extensive sampling program with a structured protocol used to obtain final samples.

Sampling programs which use the ASTM quartering techniques whereby a large sample is quartered into four sections with one section then selected for further quartering and sampling have usually given samples which are fairly representative for MSW ash or refuse. Coupled with this is the need to run multiple tests from the same sample group.

The author's curves, showing the weight reduction of residue after drying stabilization, are very similar in shape and total weight reduction. This repeatability shows that the efforts of the ASME Performance Test Code Committee 34 on Waste Combustors With Energy Recovery are definitely on track.

The author's first conclusions are consistent with the needs of the industry. It is very important that test methods be developed specifically for municipal solid waste. Neither the fuel nor the ash are homogeneous; therefore, tests must be developed which include sampling techniques and sample sizes geared toward heterogeneous fuels.

AUTHOR'S REPLY

John Eppich's kind words are appreciated. Further, his comments regarding the importance of the sampling program are well taken. Sampling procedures are being handled as a separate topic by PTC 34. Perhaps our findings will be the subject of another paper.

I would like to take this opportunity to reiterate that PTC 34 urges those who test municipal waste combustors to use the test protocol included in the paper and report their experiences to PTC 34.