

The End of "Visual Inspection"

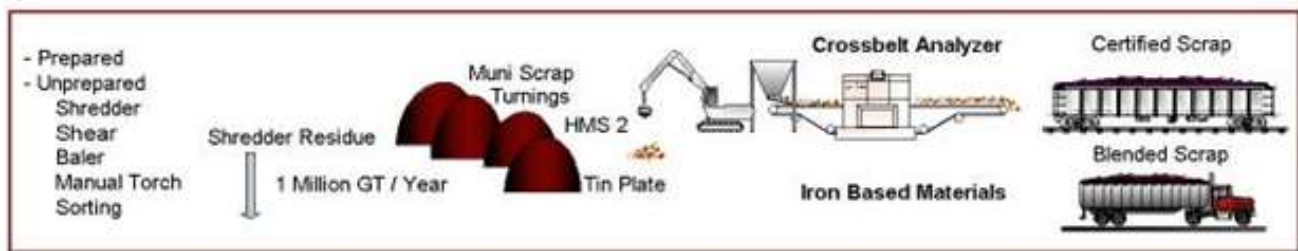
Scrap Quality Now Can Be Monitored with



The CB-RM finally provides the means to end the practice of shipping and receiving scrap to purely physical descriptions and verifying the conformance to that specification based on the subjective visual inspection of the product. The application of this state-of-the-art technology allows processors to ship shredded scrap metal to consumer specific chemistry specifications and allows mills and foundries to purchase and use material based on its metallurgical value. The arduous and inaccurate process of inspection, sampling and statistical analysis that can only produce rough estimates of material chemistries can now be replaced with Gamma-Shred analysis, a real-time, accurate analysis of composite chemistries of scrap metal. Both scrap processors and scrap consumers can profit from Gamma-Shred analysis.

Industry Flow Diagram with Typical Insertion Points for the Recycled Metal Analyzer

Processing Yards



Steel Mills - Scrap Management

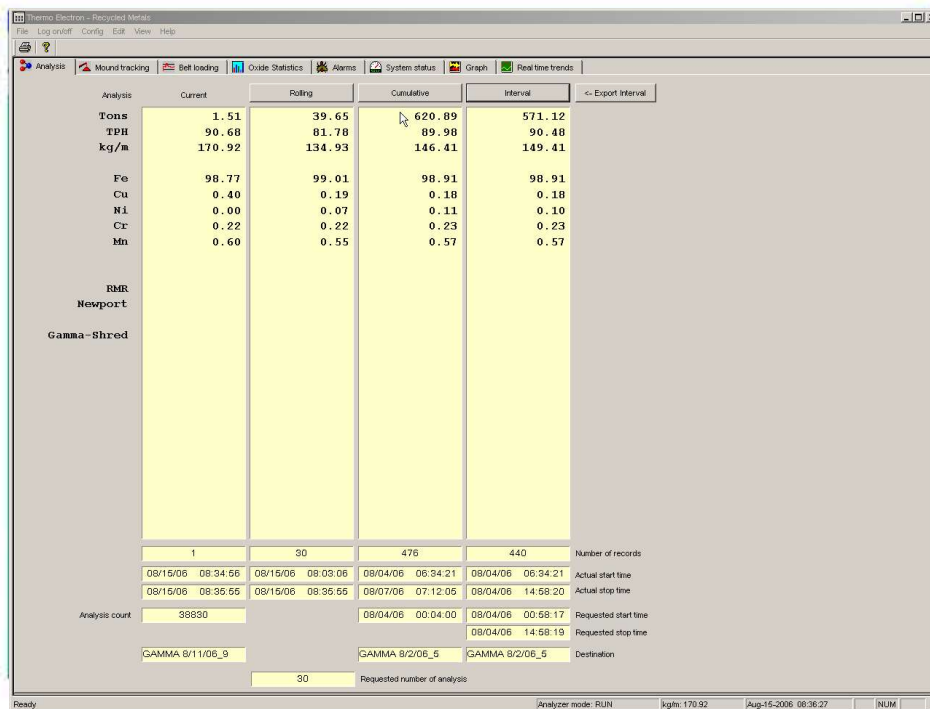


In processing operations the CB-RM can be used to certify scrap products to the consumers. This capability provides for increased marketability of products, as consumers will always tend to buy known products before the unknown. The CB-RM is a valuable tool in maximizing the opportunities for Internet business-to-business transactions by providing all interested parties a universally accepted method to characterize the items for sale. Moreover, in many cases there is the potential to obtain premiums for material that exceeds quality standards for "commodity items" of the various scrap grades. Value-added blending of multiple grades to meet the specific melting needs of consumers by utilizing the chemistry data from the BSA offers the best payback for scrap processors.

Scrap consumers can utilize the CB-RM to report the chemistry information of incoming material and pay for scrap based on its value-in-use. The optimization of the scrap charge with the potential for substitution of lower cost scrap items is possible with the analyzer. While many scrap consumers have attempted this practice in the past, it was based on statistical analysis of historical data. Now with the CB-RM, the steel mill or foundry has the advantage of knowing the composite chemistry of each scrap shipment. The savings that can be achieved with this practice is significant.

A typical installation includes a surge feed hopper capable of being fed by mobile cranes, front-end loaders or overhead cranes. The feed hopper and the variable speed conveyor in-line with the analyzer provide the necessary flow controls to present the material to the unit in the most optimum manner. An elevated stacking conveyor on the output from the CB-RM can provide the flexibility to load directly into charge buckets, rail cars, trucks, barges or inventory piles. Installations in actual scrap processing and blending operations have demonstrated the CB-RM capability to provide composite chemistries of scrap items to almost spectrographic accuracies. The CB-RM can be installed in existing operations where the scrap items are conveyed or in a new material handling system and can easily analyze material at over 200 tons per hour.

The analyzer is calibrated with those elements specific for each operation. The resulting chemistry of the material is displayed on a high-resolution monitor and can be stored or printed for future reference. The operator defines the batch size or process run on a user-friendly computer interface. The figure below is a screen which provides the most current analysis, an average analysis over a specified time period, and the analysis of the batch.

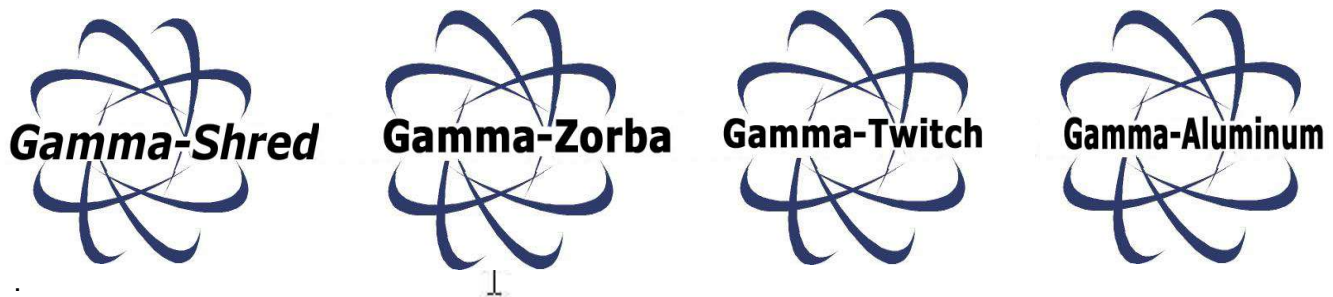




Gamma-Shred Analysis by Gamma-Tech

Gamma-Tech provides the Gamma-Shred analysis service for our customer's shredded scrap. We provide the instrument and software which analyze the material that the customer passes through the analyzer on a conveyor belt as shown previously. A reliable analysis of each batch of shredded scrap is printed out for our customers use. As part of our Gamma-Shred analysis service we also provide a complete maintenance service for the instrument, application consulting to aid our customers in getting the most value out of the instrument, and we regularly monitor the performance of the instrument via the internet to help insure that it is producing accurate results.

Similarly, we can provide analysis service for Zorba, and Twitch grades of separated scrap materials, for recycled aluminum, or for other types of recycled metal which can be passed through the analyzer on a conveyor. Gamma-Tech has established brand names for the analysis of various scrap materials. These include: Gamma-Shred Analysis, Gamma-Twitch Analysis, Gamma-Zorba Analysis, and Gamma-Aluminum Analysis. Examples of these marks are shown below. These marks are used to distinguish our analysis process. This is an important aid our customers in marketing their analyzed scrap material, since it indicates that a careful and reliable analysis has been provided and that the recycled metal user can have greater confidence that the material meets agreed specifications.



These distinctive marks are printed on the analysis sheets for each batch of scrap material being analyzed. A typical example of a batch analysis sheet is shown on the next page. It shows the number of tons in the batch but most important is shows the percentages of each of the major metallic constituents in the recycled metal. Analysis sheets are printed out for our customers and, normally, these Gamma-Shred analysis sheets are then sent to the scrap purchaser along with shipping papers and billing to attest that the material meets an agreed specification. The analysis enhances the scrap purchaser's confidence in the increased value of the scrap material. All of our customers with Gamma-Tech Service Agreements are given permission to use these analysis names in the marketing of their recycled metal materials that are analyzed with the Gamma-Tech Recycled Metal Analyzer.

04/16/01 09:41:48	Actual Start Date/Time	04/16/01 09:41:47	4/16/01 10:18:44	4/16/01 10:33:27
	Actual Stop Date/Time	04/16/01 09:41:47	4/16/01 10:19:24	4/16/01 10:34:21
QuerySetup (F2)	Actual Number of Records	6	0	0
	Destination	Mound 1	ALL	Destination