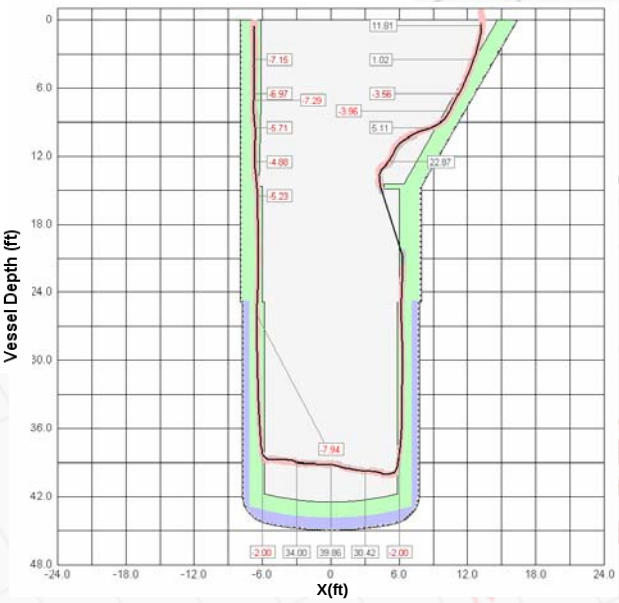
PROCESS METRIX
Instrumentation for Process Control

Your Resource for Industrial Metrology Tools

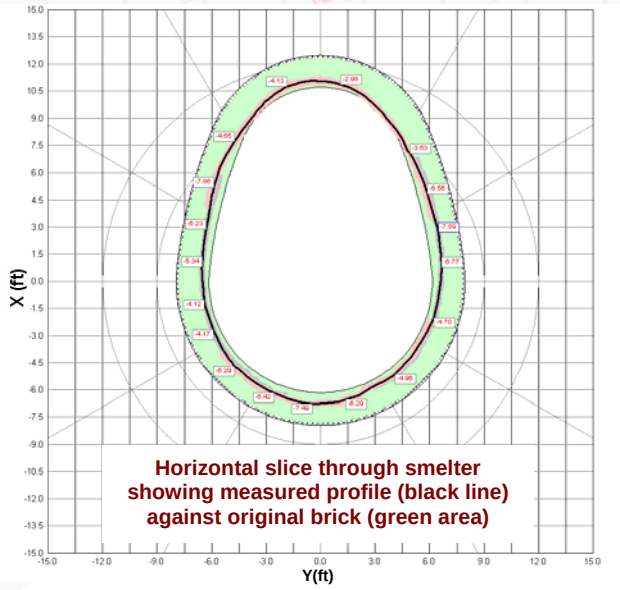
Laser-Based Brick Thickness Measurement Systems From Process Metrix

Laser profiling tools are indispensable in the steel industry for determining refractory thickness in converters and ladles. Recent measurements in the copper industry demonstrate that the same technology can also provide valuable data characterizing refractory wear in the smelting vessel. This information can be used to predict wear rates, zone the vessel with higher grade refractory in aggressive wear areas, and schedule maintenance outages consistent with plant and market needs. In short, quantitative analysis of refractory thickness gives the plant operations team a clear picture of the condition of the vessel lining, allowing timely and cost-effective vessel maintenance and operational control.



Vertical slice through smelter showing measured profile (black line) against original brick (green and blue areas)

Process Metrix offers state-of-the art laser profiling technology that can measure the entire smelting vessel in 5-10 minutes with an accuracy of ±5mm. Data density is as high as one point per square cm. Measurements are made through an access port that provides a field of view to the entire vessel interior. Using our purpose-built software tools, measurement results can be viewed through vertical and horizontal "slices" through the vessel, shown above and at right, that display the measured contour against the as-bricked profile. Thickness slices can be made at any point in the vessel. Although an ISA smelter is shown here, any vessel that has suitable access is applicable. A wall contour plot is also available that presents the entire interior thickness profile in one, easy-to-read format.



Horizontal slice through smelter showing measured profile (black line) against original brick (green area)

Working together with our industry leading measurement tools, Process Metrix can help optimize your smelter's performance and minimize refractory costs. Let our technology make the difference – for you.

Contact Process Metrix, or our alliance partner Berry Metal Company, for information on our industry-leading laser-based controuing technology.

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