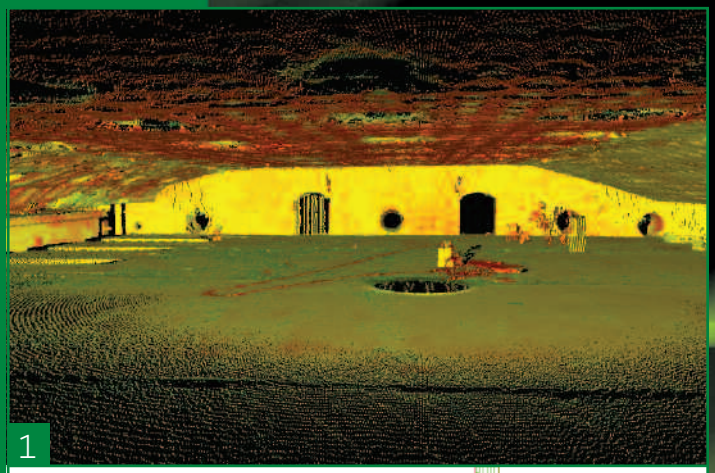
Surface Mapping: Furnace Hearth

Laser scanning is one of the newest surveying technologies available. This technology allows Falk-PLI to push the limits of surveying. Scanning allows measurements to be taken on objects with little or no physical contact with the object as well as the ability to capture data in mass quantities at a denser quantity than conventional surveying methods. The laser scanner measures individual points at a high rate of speed then joins all these points together into Point Clouds. Each Point Cloud contains millions of points, with each point in the cloud having 3D (X,Y,Z) coordinates with an accuracy of ± 1/8".

Falk-PLI continues to use laser scanning on industrial jobs such as the hearth of a reheat furnace at a hot strip mill. Using the laser scanner on this job allows us to gather a vast amount of survey points and then use them to develop a surface map. A surface map is a map that shows deviations in respect to a reference plane; this may be a vertical, horizontal, or an angled plane. Falk-PLI produces various types of surface maps for reports, including surface maps with contours and spot elevations (no color-coded intervals exist) and surface maps that contain color-coded intervals with spot elevations.



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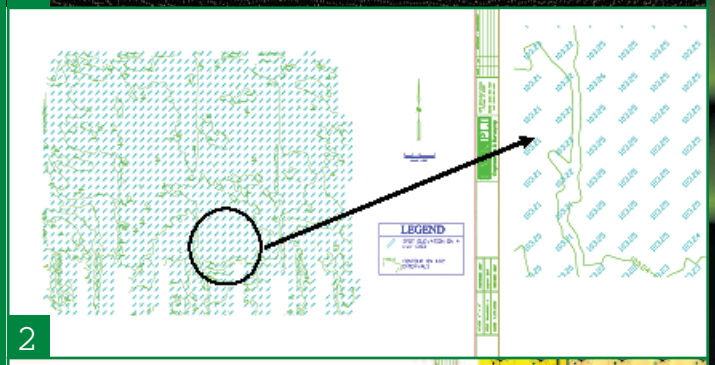

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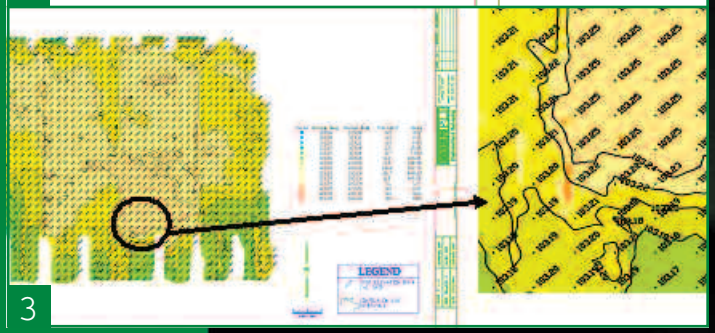

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1 ***Hearth of a reheat furnace at a hot strip mill.***

2 ***Typical surface map with contours and spot elevations.***

3 ***Surface map with color-coded intervals and spot elevations.***

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