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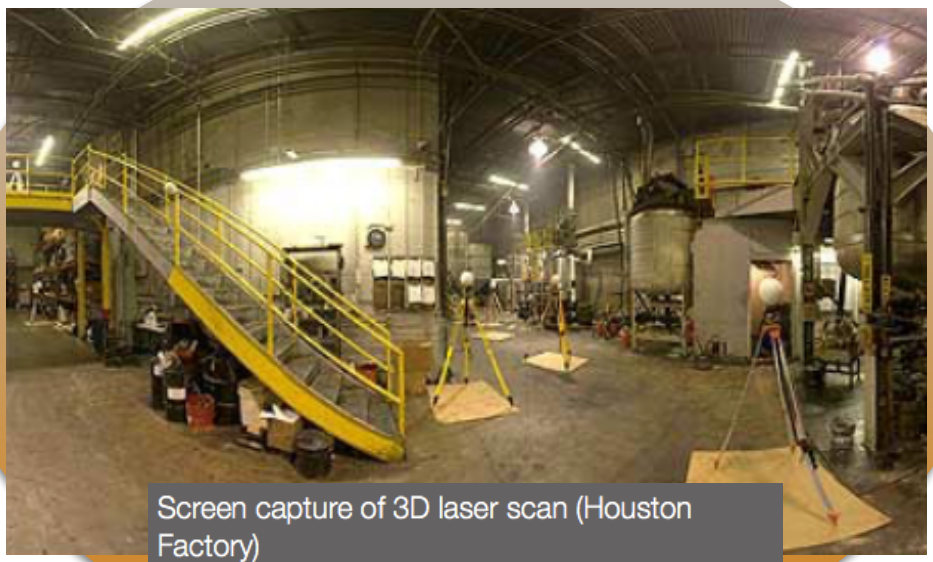

Screen capture of 3D laser scan (Houston Factory)

Case Study:
Jet-Lube

REM's PhotoReal™ Modeling Simplifies Corporate Relocation

Project Details

Project: 3D Architectural Modeling / BIM: Factory Redesign
Location: Dallas and Houston Texas
Process: 3D Laser Scanning

Time-Savings and Cost Reduction in Factory Redesign with 3D Scanning / Modeling

Any company looking to relocate their corporate headquarters to a smaller facility may need to redesign or tighten their operation. Jet-Lube, the recognized world leader in manufacturing industrial lubricants, faced exactly that challenge...

... So when moving their Houston headquarters to a smaller Dallas facility, Jet-Lube asked for REM's precision scanning and 3D modeling services to guide their factory redesign.

The Challenge

Jet-Lube's Houston plant had operated with exceptional production efficiency, but the large facility was aging. The newer Dallas facility was modern, yet smaller, and used a dissimilar operating structure. In relocating, the company also wanted to streamline and consolidate their operation.

Considering factory redesign, Jet-Lube dealt with a tough question. Should they reposition the Houston facility in Dallas, and maintain its function as an individual unit within the Dallas plant? Or, should the Houston plant's pattern be interspersed into the company's new operating structure in Dallas?

A Reliable Solution

Analysis of REM's laser-scanning data revealed a reliable solution for the factory's redesign. From the scanned data, REM created a 3D model of the Houston plant, which accurately detailed the location of all equipment and piping in relation to the factory space.

Accuracy was critical in this project. Design engineers required exact information regarding the interconnection of the Houston plant's specialized assembly equipment. Precise spatial measurements gathered from REM's 3D model also showed whether the available space in the Dallas building was sufficient to accommodate the Houston facility's equipment.

Superimposing the scanned model of the Houston plant over the model of the Dallas plant provided essential data for design engineers to determine the most effective method for consolidating the two operations into the smaller Dallas building. REM's 3D model accurately documented all elements of the Houston plant so that the Dallas plant could be reverse engineered with the equipment and layout of the Houston plant.

Point cloud laser scan used in analyzing the existing structure and operations

The Results

Using REM's laser scanning service, Jet Lube's design engineers were able to make precise spatial measurements. Information from REM's 3D model allowed the engineering team to view the interaction of volumes. This key data enabled design engineers to optimize workflow and efficiency. This data made possible Jet Lube's relocation 3 months ahead of schedule. The savings in time and labor reduced relocation costs.

> Our experience with Jet-Lube proved that laser scanning in as-built industrial plants is a significant time-saving investment in building redesign. One week of our on-site field work and processing can save our clients 3 to 6 months of labor and time.
>
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> Co-founder, CEO Real Earth Models, LLC

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Learn more at:
www.realearthmodels.com

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