

## RETROFIT CASE STUDY

### Cambridge Space Heaters vs. Indirect Fired Air Turnover

### Steel Storage Warehouse - Indiana

#### Building Specifications

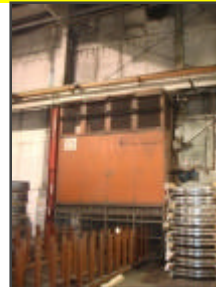
- 100,000 ft<sup>2</sup>
- Located in Butler, IN.
- 1 @ 3225 MBH / 100,000 CFM 28 Total HP
- 1 @ 750 MBH / 20,000 CFM / 5 HP Motor



#### Building Specifications

- 166,000 ft<sup>2</sup> (66,000 ft<sup>2</sup> addition)
- 4 @ 1200 MBH / 5700 CFM / 3 HP Motors

#### Before – Indirect Fired Air Turnover

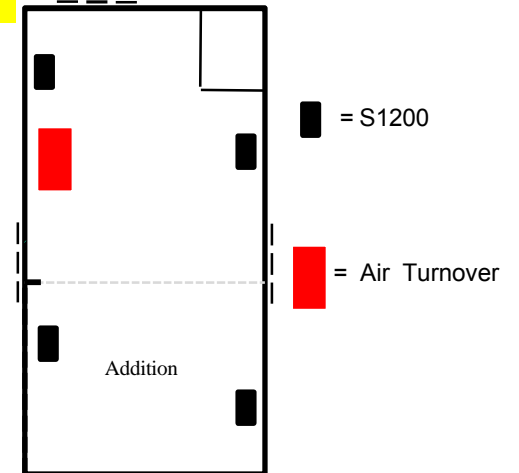


#### Operating Costs

\$0.60/ft<sup>2</sup> Gas cost @ \$1.00/therm  
\$0.13/ft<sup>2</sup> Electric cost @ \$0.08/kWh

**\$0.73/ft<sup>2</sup> Total cost**

#### Layout



#### After - Cambridge Space Heaters



#### Operating Costs

\$0.24/ft<sup>2</sup> Gas cost @ \$1.00/therm  
\$0.01/ft<sup>2</sup> Electric cost @ \$0.08/kWh

**\$0.25/ft<sup>2</sup> Total cost**

- “Huge noisy monster replaced by four smaller units”
- “More consistent temperatures”
- “Dock areas were 10? cooler”
- “Cost savings is tremendous”

Todd A. Lanning

Executive Manager of Operations  
Paragon Steel

## Summary

After building size increased **66%** and a new Cambridge heating system was installed in the entire building, the fuel cost still decreased by **66%**