



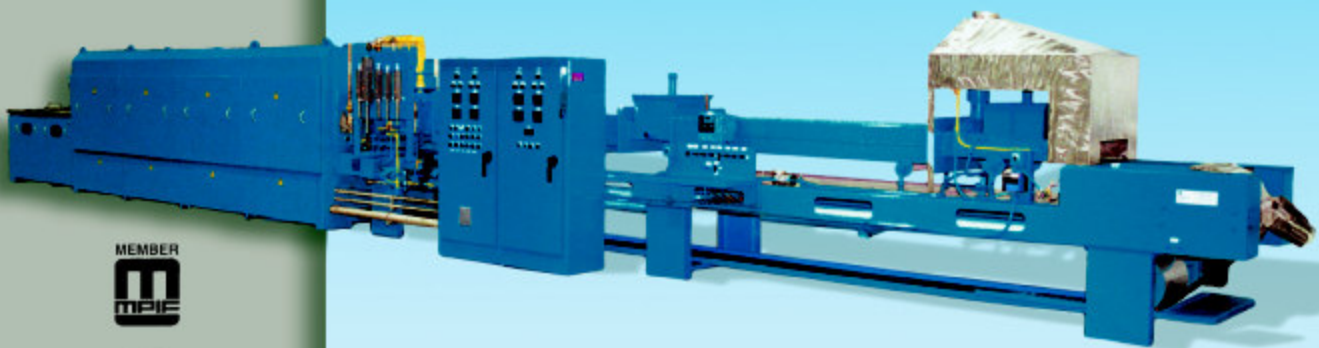
Product Case Study

Fusing
Materials,
Equipment
and
Technology

Energy Savings

A 40 year old furnace hot box is replaced with a new, state of the art, High Heat Chamber resulting in energy, atmosphere, and operational improvements.

**SINTERITE'S CUSTOMER ENJOYED A
PAYBACK OF LESS THAN THREE
YEARS.**



GASBARRE
PRODUCTS, INC.

S I N T E R I T E F U R N A C E D I V I S I O N

SCOPE

A steel annealing furnace, processing approximately 1,300 pounds per hour in a 100% nitrogen atmosphere, was upgraded by replacing the heating section (over 40 years old) with a new 3 Zone, Silicon Carbide, 24 Inch Muffle, ETS high heat chamber designed and built by Sinterite.

Power and atmosphere consumption of the existing furnace was measured and expected improvements computed. The new heating chamber was installed and the power and atmosphere consumption was measured in similar production conditions as the pre-installation test.

RESULTS

MEASUREMENT	OLD FURNACE	COMPUTED FOR NEW FURNACE	ACTUAL FOR NEW FURNACE	SAVINGS
Power (W) Idle	35,614	15,591	14,800	58%
Power (W) Loaded	112,664	71,190	75,695	33%
Lbs/Hr	1,287	1,287	1,330	
W/lb	87.54	55.31	56.91	35%
Atmosphere (cf/week)	357,600	264,000	264,000	26%

5 DAYS PRODUCTION, WEEKEND IDLE	WEEKLY SAVINGS
Power (kw)	5,435
Atmosphere (cf)	93,600

CONCLUSION

In addition to the power and atmosphere savings, benefits are being realized due to easier furnace maintenance, more favorable work environment due to reduction of heat loss, and improved uniformity.

The project had a payback of less than three years.

BENEFITS:

- Less Energy
- Less Atmosphere
- Easier Maintenance
- Better Uniformity
- Less than 3 year payback.

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