

FivesNA Delivers:

- **Increased production**
More tons per hour
- **Reduced downtime**
More process availability
- **Lower energy consumption**
Less dollars per ton
- **Lower emissions**
For "green" goals or regulation requirements
- **Improved product quality**
Less scrap
- **Reduced labor costs**
More profit per ton

Furnace Health and Efficiency

Monitoring through our smart SCADA program assures consistent heating.

- Alerting quality issues before they happen
- Optimizing furnace productivity
- Determining ideal furnace loading practices
- Predicting steel heating quality

High Performance Process Furnaces for the Forging Industry



Fives North American is a single-source supplier of forging and heat treat furnaces.



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Providing the best in combustion systems, industrial furnace design, construction, and support services for improving thermal processes.

Thermal Process Solutions for Forging

We have the know-how, experience, and technology to best meet the needs of the Forging Industry.

To provide the highest value to our customers, we have joined the capabilities of our furnace division, **North American Construction Services**, with our combustion division, **Fives North American Combustion**. Combined, we offer the Forge Industry unique, engineered solutions.

As a single source supplier of regenerative Forge Furnaces and high velocity Heat Treat Furnaces, we provide our customers process solutions, from initial development through project execution, that deliver lasting business value.

FORGE FURNACES

- Box
- Carbottom
- Rotary

HEAT TREAT FURNACES

- Box
- Carbottom
- Tip Ups

MEETING THE MOST STRINGENT TUS REQUIREMENTS

- Airbus
- Bell Aerospace
- Boeing
- GE
- Mil Specs US Navy
- Pratt & Whitney
- Rolls Royce



Box Furnace

Capabilities

Heat Treat Furnaces

■ Class I Furnaces

Cold air furnaces pulse firing with excess air
(+/- 5 F @ 600 F)

■ Class II Furnaces

Cold air furnaces firing with excess air
(+/- 7 F @ 600 F & 1500 F)

■ Class III Furnaces

Cold air furnaces firing with excess air
(+/- 13 F @ 1500 F & 2100 F)

Forging Furnaces

■ Class II Furnaces

Multi pair of 4343 TwinBed II burners firing on ratio
(+/- 15 F @ 1650 F & 1900 F)

■ Class IV Furnaces

Single pair of 4343 TwinBed II burners firing on ratio
(+/- 20 F @ 2200 F)

■ Class V Furnaces

Single pair of 4343 TwinBed II burners firing on ratio
(+/- 25 F @ 2400 F)

Application Benefits

AMS 2750 heating quality without excess air

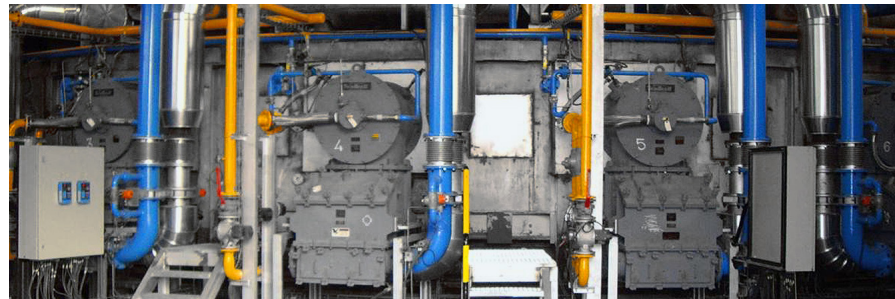
35% to 50% reduction in unit heating cost compared to cold air systems

CO₂ emissions reduced in direct proportion to fuel reduction

Environmentally neutral on NO_x formation

Potential to increase productivity by optimizing furnace efficiency using advanced data acquisition

Rotary Furnace



Tip Up Furnace

