FivesNA Delivers:

- **Increased production**
  More tonnes per hour

- **Reduced downtime**
  More process availability

- **Lower energy consumption**
  Less euros per tonne

- **Lower emissions**
  For "green" goals or regulation requirements

- **Improved product quality**
  Less scrap

- **Reduced labor costs**
  More profit per tonne

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**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

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**High Performance Process Furnaces for the Forging Industry**

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

Providing the best in combustion systems, industrial furnace design, and support services for improving thermal processes.
We have the know-how, experience, and technology to best meet the needs of the Forging Industry.

From regenerative Forge Furnaces to high velocity Heat Treat Furnaces, we provide our customers professionally designed 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

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**Heat Treat Furnaces**

- **Class I Furnaces**
  - Cold air furnaces pulse firing with excess air
  - \( \pm 2.8 \, ^\circ C \) @ 316 °C

- **Class II Furnaces**
  - Cold air furnaces firing with excess air
  - \( \pm 3.9 \, ^\circ C \) @ 316 °C & 816 °C

- **Class III Furnaces**
  - Cold air furnaces firing with excess air
  - \( \pm 7.2 \, ^\circ C \) @ 816 °C & 1149 °C

**Forging Furnaces**

- **Class II Furnaces**
  - Multi pair of 4343 TwinBed II burners firing on ratio
  - \( \pm 8.3 \, ^\circ C \) @ 899 °C & 1038 °C

- **Class IV Furnaces**
  - Single pair of 4343 TwinBed II burners firing on ratio
  - \( \pm 11.1 \, ^\circ C \) @ 1204 °C

- **Class V Furnaces**
  - Single pair of 4343 TwinBed II burners firing on ratio
  - \( \pm 13.9 \, ^\circ C \) @ 1316 °C

**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 NOx formation
- Potential to increase productivity by optimizing furnace efficiency using advanced data acquisition

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**Thermal Process Solutions for Forging**

**Application Benefits**

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