The active heat treatment of finished parts in carbon steel is done under **ALNAT C** Nitrogen and Methanol atmospheres solution with major benefits:

- $\text{N}_2-\text{CO}-\text{H}_2$ carrier gas with low $\text{H}_2\text{O}$, $\text{CO}_2$ and $\text{O}_2$ contents
- Improved direct injection of the mixture in the furnace
- Carbon potential easily controlled
- Upgrade of your process performance
- Minimal capital expenses and maintenance
- Easy installation and operation
- Furnace safety management with Nitrogen
**A high quality atmosphere**

Based on the precise mixing of nitrogen and methanol, **ALNAT C** ensures a large range of atmosphere composition. The high quality of those two fluids gives a high purity mixture with low H₂O, CO₂ and O₂ contents to get a highly reproducible atmosphere’s composition.

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**Adapted to many metal heat treatments**

- For carburising, carbonitriding and neutral hardening of carbon steels
- In sealed quench batch-type furnaces, pit or continuous belt, roller hearth and pusher-type furnaces
- The zoning of continuous pusher furnace is adapted to optimise the carburising/diffusion rate and the total gas flow-rate.
- Nitrogen atmosphere for furnace safety

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**Extended ALNAT offers**

**ALNAT Expertise** to qualify the performance of your furnaces

**ALNAT Control** to monitor your carbon content of the steel

**ALNAT Performance**:

- Complete process control to optimize the quality and flow-rate of the atmosphere delivered to your furnaces
- On-line atmosphere analysis (CO/CO₂/CH₄) and-or (H₂O/O₂ probe)
- Telemetry for remote monitoring and reporting

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**Customized installation**

- Engineered and designed to your specific needs
- Improved direct injection lances and pump skid for Methanol
- **ALNAT C** panel supply for multi-furnace or single furnace
- Preventive and corrective Air Liquide maintenance
- Dedicated Ammonia technology for carbonitriding
- Consulting and training on gas handling and safety
- Automatic Nitrogen safety pipeline and procedures

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World leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with more than 50,000 employees and serves more than 2 million customers and patients. Oxygen, nitrogen and hydrogen have been at the core of the company’s activities since its creation in 1902. Air Liquide’s ambition is to be the leader in its industry, delivering long-term performance and acting responsibly.