

Fired Industrial Furnace - Billet Re-Heating & Heat Treatment

CAPABILITY SHEET - FORGING RE-HEAT & HEAT TREATMENT - ENGINEERED TO ORDER

THE FURNACE

WHAT	A gas or oil-fired industrial furnace that brings steel billets and components to a controlled, uniform temperature - billet re-heating to ~1250 C before the forge, and heat treatment (normalize, anneal, temper, stress-relieve, pre-heat) after. Rotary-hearth, walking-beam and chamber types.
THE FIRST TOOL	You cannot forge, nose or blank a cold billet - the metal must be at forging temperature and soaked through, core as hot as skin, or it cracks, stalls the press and forges with the wrong grain flow. The furnace is the forge's first tool.
STATUS	Engineered to order and delivered turnkey; quoted across forging and heat-treatment furnace requirements. No specific delivered furnace is claimed on this sheet.

HEAT & UNIFORMITY

TEMPERATURE	Up to ~1250 C for forging re-heat; heat-treatment ranges to the process recipe, with controlled ramp and soak to the billet's thermal mass.
UNIFORMITY	+/-10 C temperature uniformity - the AMS 2750 discipline - proven by a witnessed temperature-uniformity survey (TUS) with a calibrated thermocouple grid, plus a system-accuracy test on the instruments. Uniformity is demonstrated, not asserted.
SCALE CONTROL	Controlled firing, atmosphere and minimal residence keep oxide scale down - every kilogram of scale is lost steel and a die-wearing abrasive downstream.

FIRING & CONTROL

RECUPERATIVE FIRING	Multi-zone gas or oil burners, ratio-controlled, with a recuperator that recovers the hot flue off-gas to preheat the combustion air - materially less fuel for the same delivered heat. On a 1250 C furnace it is the single biggest lever on running cost.
HANDLING	Charge and discharge by roller table, pusher, walking beam, rotary-hearth index or manipulator - doors, seals and hearth engineered to the billet size and cadence.
CONTROLS & SAFETY	Multi-zone PLC / PID with per-zone thermocouples, ramp/soak recipes and run logging; a burner-management system with flame supervision, purge and interlocks.

SCOPE & ENGAGEMENT

SOURCING	Burners, burner-management, recuperators, refractory and instrumentation are proprietary items from established makers; a furnace-technology OEM partner is engaged for the largest continuous lines where a prior track record is required. Neometrix engineers and integrates the furnace.
COMPLETES THE FORGE LINE	This is the front half of the forging line whose presses Neometrix also engineers - the extrusion, nosing and blanking presses. The furnace brings the billet to temperature; the presses form it while it is hot. One discipline, one supplier.
ENGAGEMENT	Send the billet size, temperature, uniformity class and throughput to sales@neometrixgroup.com - a clause-by-clause compliance matrix within two working days.

DEFENCE PROGRAMMES DESK

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