With the purchase of assets of Engineered Finishing Systems (EFS), we now offer porcelain enamel expertise to our portfolio in automated finishing systems, including liquid paint, powder, electrocoat, anodizing, plating, and now - porcelain enamel. With the addition of porcelain enamel and the expertise of key EFS personnel, KOCH provides the widest range of automated finishing systems in the world.

Our porcelain enamel furnaces are engineered to maximize efficiency, achieve an optimum firing curve, and minimize dirt generation or infiltration and maintenance.

We design furnaces to cure enamel, either wet or powder, from any of the major enamel suppliers, and our furnaces finish parts uniformly and completely without discoloration or dirt rejects.

SYSTEM OPTIONS

- Batch
- Intermittent
- Continuous

Our heating system, electric or gas, is designed to gradually and steadily raise the part temperature from ambient to set point (1400° to 1600°). Once the part reaches the set point, its temperature can be maintained within 1/2 to 1% from the top to the bottom of the part throughout the conveyor path in the furnace.
Our furnaces have many superior FEATURES & ADVANTAGES

- Bottom ventilation assuring non-deterioration of concrete surface under the furnace
- Proven outer shell expansion design preventing shell uncontrolled deflections
- Proven interior alloy expansion control system design preventing premature degradation of internal alloy
- Anticipated 6 to 14-year interior alloy life based on proven installations after many years of observation
- Multi-zone control allowing effective tailoring of the firing curve
- Top-to-bottom temperature control consistency with a bottom heat provision and consistent graduated top-to-bottom heat flux input; 10°F over a 6-foot parts package is typical
- The staggered joint blanket insulating system provides the lowest heat loss of all available systems
- All internal alloy is 35% nickel - 15% chrome providing a lower specific heat and higher thermal conductivity
- Integration of internal, external and secondary heat recovery systems delivers the greatest degree of energy efficiency available for enameling operations
- Advanced firing package is unmatched in component reliability and repeatability of performance
- The only manufacturer with a proven powder air seal design which seals the end of the furnace
- Using combustion air preheat, it delivers 10% higher firing efficiency than comparable systems
- With preheat, the only system with rich condition supervision and alarm to warn of unsafe operation
- Alloy shoe plate track (304 SS) decreases both dirt and maintenance
- Adequate clearance built into firing chamber to minimize wrecks caused by fallen parts
- Effective center wall design results in long life and low maintenance
- Dog Leg or “T” entrance/exit minimizes radiation losses
- Furnace assembly reasonably portable. Can be disassembled in 9 foot segments and moved if required
- Capacity can be readily increased by adding hot zone modules; only the rear of the furnace expands, and this could be done over 2 one-week summer shut downs

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