

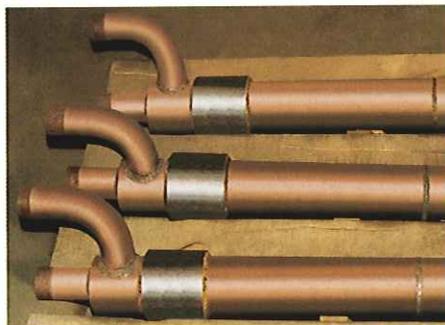


Berry Metal Company's partnership with Falcon Foundry brings to ironmaking customers advanced equipment that is easily interfaced to the ironmaking process, improves efficiency, is simple to install and dramatically reduces costly downtime.



Blast Furnace Components

Falcon Foundry's Blast Furnace components include tuyeres, tuyere coolers, cooling plates, cigar coolers, staves and grout plates.

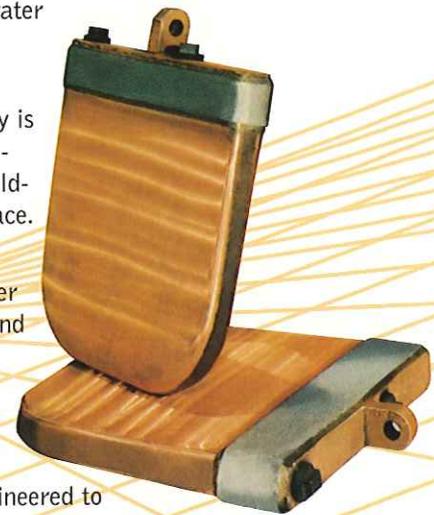


For more information on this and other technological innovations made available through our partnering agreements, contact Berry Metal Company at 724-452-8040 or www.berrymetal.com or Falcon Foundry at 330-536-6221 or www.falconfoundry.com.

- Exterior hard surface welding to reduce wear in high-wear areas to extend service life is available.
- The high quality casting process allows for gas-tight fit and grout holes.
- Specially-designed water passages are calculated to allow for efficient cooling, with minimum pressure drop due to the smooth inside surfaces, resulting in minimal wear.
- Falcon brings 50 years of non-ferrous casting experience to the metals industry.

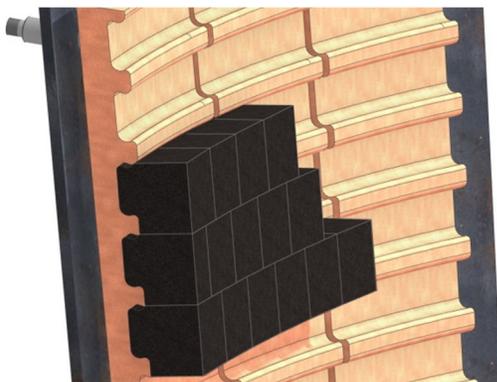
UltraLife™ Copper Casting Technology

- The patented UltraLife™ Technology can be designed into the Falcon Foundry Blast Furnace Product Line.
- The UltraLife™ Technology features single- or double-compartment water chambers with separate water feeds.
- The UltraLife™ Technology is designed with steel attachments to permit direct welding or bolting to the furnace.
- The metallurgical bond created between the copper alloy pipe coil assembly and the copper casting results in superior heat transfer.
- The UltraLife™ Technology can be custom-designed and engineered to meet your application.
- The UltraLife™ Technology is constructed of high conductivity/high purity copper.





UltraLife® Copper and Cast Iron Staves with Double Locking Refractory System



Installation Savings

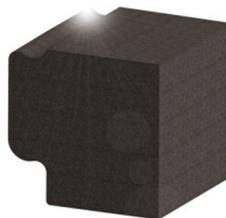
- Utilize existing holes in the furnace
- Utilize existing water system (Circle pipes, pumps, cooling, etc.)
- Minimize installation time and outage days. (Have achieved 9 day reduction in outage when installing 5 rows of staves)
- Minimize new shell holes
- Eliminate sealing old shell holes.
- Engineering and installation support included in equipment supply

Operation Benefits

- Copper stave furnaces can achieve 15 to 30% increase in furnace volume as compared to a copper plate cooled furnace or a cast iron stave furnace
- Less heat loss to vessel walls resulting in a reduction in coke consumption
- Robust refractory system minimizes mechanical damage resulting in longer campaign life and consistent wall temperatures



SiC and Fused Alumina

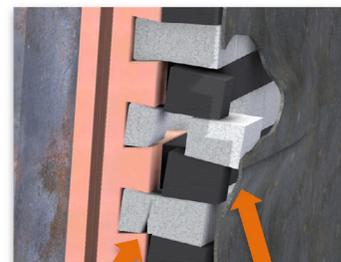


Graphite

Design Benefits

- Designs engineered to fit existing furnace
- The Ultralife® technology allows any shape stave to be produced
- Direct replacement of cast iron or copper staves and copper plate cooled furnaces
- Double compartment Ultralife® staves are designed and proven to operate if one cooling circuit is lost
- Elimination of flow voids. Uniform flow, velocity, and pressure drop
- Elimination of plug welds and welded pipe attachments to staves
- The metallurgical bond created between the copper alloy pipe coil assembly and the copper casting results in superior heat transfer

Say goodbye to the problems of traditional stave systems



Crack Propagation Accretion And Refractory Loss

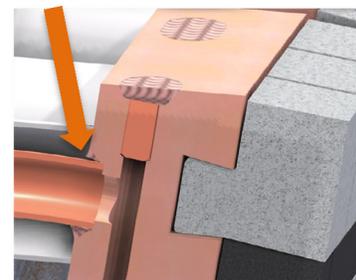
Face Washing

Weld washing and cracks

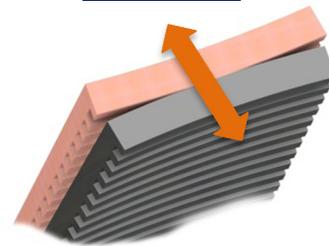


Plug Welds

Weld failure



Pipe Welds



Deflection



ADVANCED IRONMAKING TECHNOLOGY

For more information on this and other technological innovations made available through our partnering agreements contact Berry Metal Company, Blast Furnace Product Manager - Todd Smith at 724-316-8949

