Semi-universals were a huge development in the simplification and ease-of-installation of ladle linings. One shape, low skill-level required, fast installation times, and the flexibility to handle ladles that aren't perfectly round were tremendous advantages. Two of the biggest drawbacks were the need for a starter set and the occasional need for a tilt-back for tapered ladle sidewalls. The starter set creates a serious geometry problem that results in open head joints that propagate to the top of the ladle. The tilt-back adds a shape and another level of complexity to the design and adds time to the reline. With the tilt/starter set you eliminate the need for extra brick because the tilt is already built into the starter set. These sets are customdesigned so that each set goes exactly half-way around the inside circumference of the ladle. In this way, every head joint is tight (100% of brick are at exactly the same angle). We can do this in any shape of semi-universal or mini-key, and in any brick quality. Others have tried this with pre-cast shapes, but with FRC Global, you get the lower cost and improved properties of brick without introducing a new composition in such a critical area as the floor-to-wall joint.
FRC Global is a leading supplier of refractories, electrodes, and high temperature combustion systems. We provide outstanding results for our clients within the iron, steel, and non-ferrous industries. Our company’s reputation is built by delivering high quality products made with premium raw materials. Through the use of vast global resources, all of us at FRC Global are committed to being the value creators and problem solvers for our industry.