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# MANUFACTURING

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**CGThermal LLC**



*The annual listing of 10 companies that are at the forefront of providing  
Chemical Tech solutions and impacting the industry*

# CGThermal LLC

## Process Technology Solutions

**T**he chemical and metals processing industries have unique problems related to heat and mass transfer, storage, and transport because of the challenging fluids they process. To address these concerns, Ohio-based manufacturing company CG Thermal LLC delivers process equipment, turnkey solutions, technical support, and consulting services. Its mission is to partner with its clients to minimize their operational cost and maximize productivity.

For example, many of the processes that these industries employ use fluids that are highly corrosive, and often abrasive as well. Furthermore, salts and inert substances contained in these streams may deposit on equipment surfaces reducing efficiency, productivity, and operating life. Highly engineered process equipment and a system design approach that emphasizes attention to detail is the need of the hour—and this is where CG Thermal emerges as a game-changer in the industry.

CG Thermal provides corrosion-resistant heat exchangers and turnkey systems that cater to the unique requirements of its clients. Having robust equipment in place, the company's clients can operate their process with maximum uptime. CG Thermal has developed its thermally conductive ceramic shell and tube heat exchangers to endure both corrosion and erosion. These solutions provide an unconditional guarantee against all of its ceramic tubes. Additionally, its graphite heat exchangers are engineered to be the preferred solution for processing sulphuric acid, hydrochloric acid, phosphoric acid, nitric acid, and bromine compounds.

In designing solutions, CG Thermal works alongside the client in a close and transparent partnership to discuss their requirements and processing objectives. The company jointly agrees on the best solution before designing and building equipment and systems which meet clients' unique requirements. All equipment and systems come with a guarantee on both structural integrity and thermal performance. Richard Chandler, the president of the company says, "We listen to our clients carefully to understand and anticipate their needs. We owe our success to straightforward dealing with clients and suppliers that encourages open dialogue to find the best solution."

CG Thermal is constantly striving to expand the ways to apply its expertise and add value for its clients. One example of this is their innovative design (patent pending) which increases the size range of its Umax ceramic heat exchangers. This product, with a long and successful history, had heretofore been limited to about sixteen-inch (406mm) diameter units. CG Thermal's new design allows this award-winning technology to be applied to units practically as large as required.

CG Thermal's collaboration with a leading chemical company stands as a testimony to its abilities in providing best-in-class solutions. The client was facing frequent replacement of a gas recuperator because of uneven thermal stresses and premature corrosion. Using finite element analysis (FEA) and computational fluid dynamics (CFD), CG Thermal eliminated the thermal stresses and extended the life of the client's equipment from less than two years to twelve years.



Richard Chandler

For the future, CG Thermal is looking to supplement its maintenance services by expanding its repair and maintenance centers on the Gulf coast and in Louisiana with the addition of in-plant cleaning services. Since chemical companies prefer on-site maintenance to avoid environmental releases, CG Thermal is adding a fleet of maintenance trucks to initiate on-site cleaning of equipment. Also, by continuously enhancing its offerings and taking full responsibility and "ownership" of the process solutions it offers, CG Thermal is aspiring to be the most sought-after partner for its clients. "Our long-term vision is to make CG Thermal an indispensable resource for our customers by finding and supplying the best technologies, solutions, and expertise worldwide to improve their competitive position," concludes Chandler. 