# CGThermal

## Process Technology Solutions

for Harsh and Corrosive Process Streams


CGThermal

Process Technology Solutions

for Harsh and Corrosive Process Streams


- The CG Approach
- Our Capabilities and Areas of Expertise
- Advantages of working with us

# Company Overview


# Recent Facility Expansion to Support Systems Growth

- Growing demand for Systems projects
- Space for additional equipment and staffing


# Recent Facility Expansion to Support Systems Growth



- Specialized systems engineers on staff
- New, larger space to enable further growth

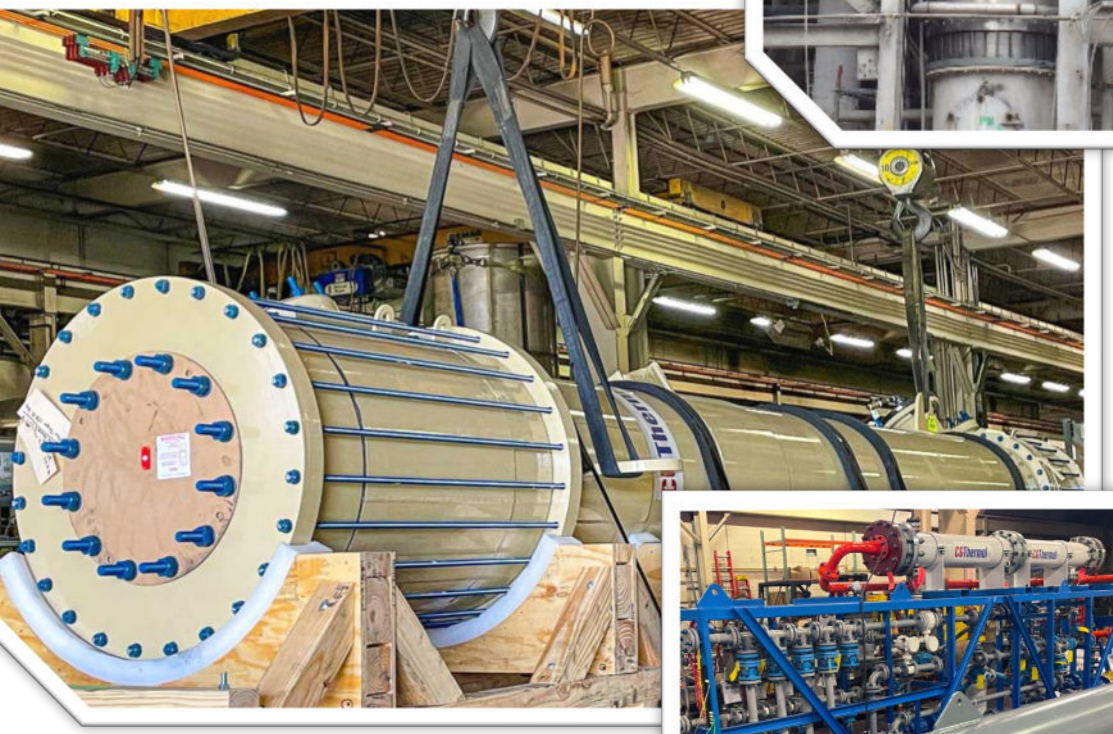
# Mission, Values, Vision

*At CG Thermal we proudly:*

***Listen*** to our customers to understand their unique challenges and objectives.

***Design*** the best solution for their process equipment and systems needs, emphasizing teamwork, safety, and reliability.

***Deliver*** the product solution using only the most suitable materials and technologies available worldwide. The success of our customers is paramount, and we maintain a personal stake in the successful implementation of the result.



We combine our **heat/mass transfer expertise** and fabrication capabilities with our process expertise to deliver optimal, proven processing technology solutions for **harsh and corrosive process streams**

CGThermal

- Turnkey Packaged Unit
- Engineering Services
- Optimization Consulting
- Customer Specific Process Equipment
- Engineering and Technology Support

CGThermal

# Process System Expertise

## Additional Areas of Expertise

- **HCL** Recovery
- HCL Azeotrope Breaking
- **AHCL** Production
- **H2SO4** Dilution
- **HF/Nitric** Cooling System
- **Cl2** Recovery
- Pilot plants
- Crystallization
- Pyrolysis
- VOC Stripping / Scrubber

# Specialized Materials

With expertise to recommend the most appropriate option for your harsh process requirements

- **Impervite® Graphite**
- **Umax SiC Ceramic**
- **Impervite® Advanced Graphite**
- **SST/Nickel-based Alloys**
- **Fluoropolymers**

CGThermal

# Impervite® Graphite

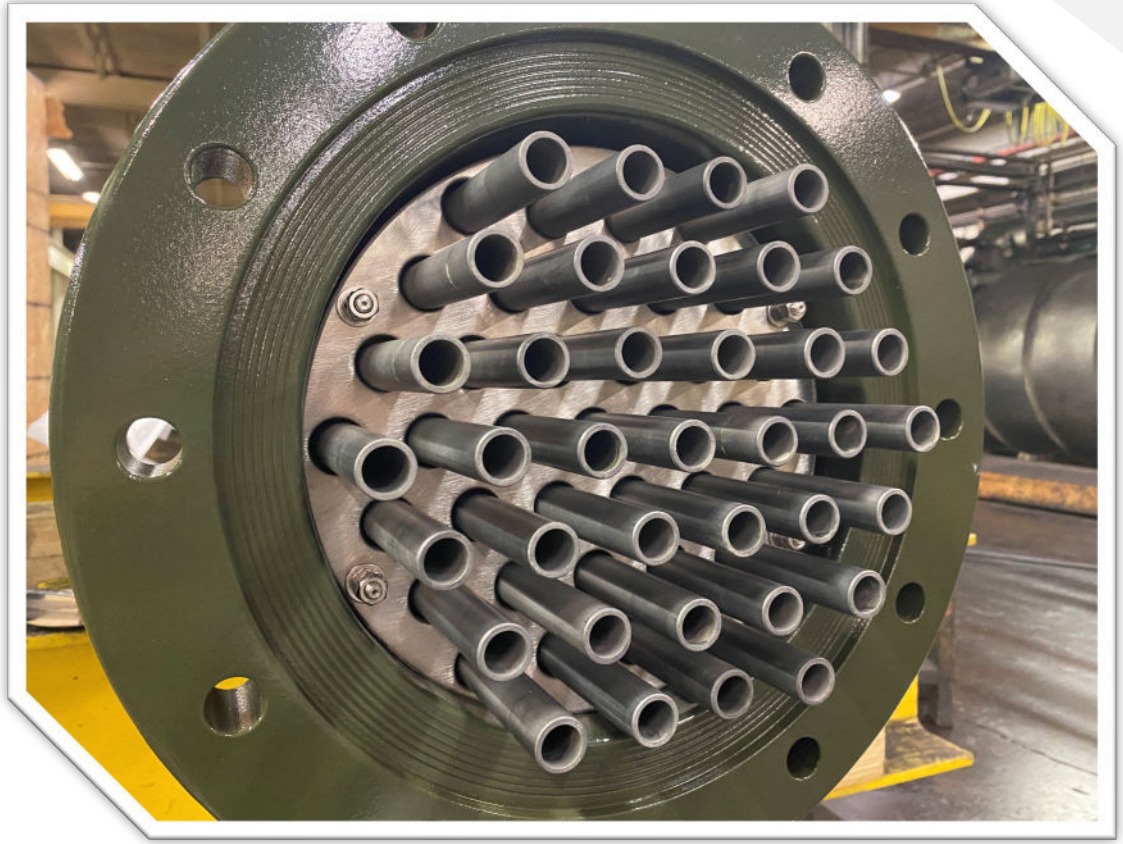

- **Excellent corrosion resistance** in reducing environments with higher chloride concentrations.
- Higher thermal conductivity and thermal shock resistance.
- Fully graphitized, more ductile graphite resulting in **extended operating life.**

- Corrosion resistant in all concentrations of HCL and up to 85% $H_2SO_4$.

CGThermal

# SiC Umax Advanced Ceramic


- Universally **erosion and corrosion resistant**
- **Unmatched** high thermal conductivity and thermal efficiency
- **Alpha sintered SiC** tube with no free silicon
- Extremely hard, easy to clean surface.



CGThermal

# Impervite® Advanced Graphite

- Graphite composite material
- Extended **corrosion resistance in HCl, $H_2SO_4$ and $P_2O_5$ applications.**
- Superior **resistance to thermal stock**
- Ductile material **resistant to vibration stresses**
- Higher pressure applications
- **Resistant to fouling and easily cleaned**

CGThermal

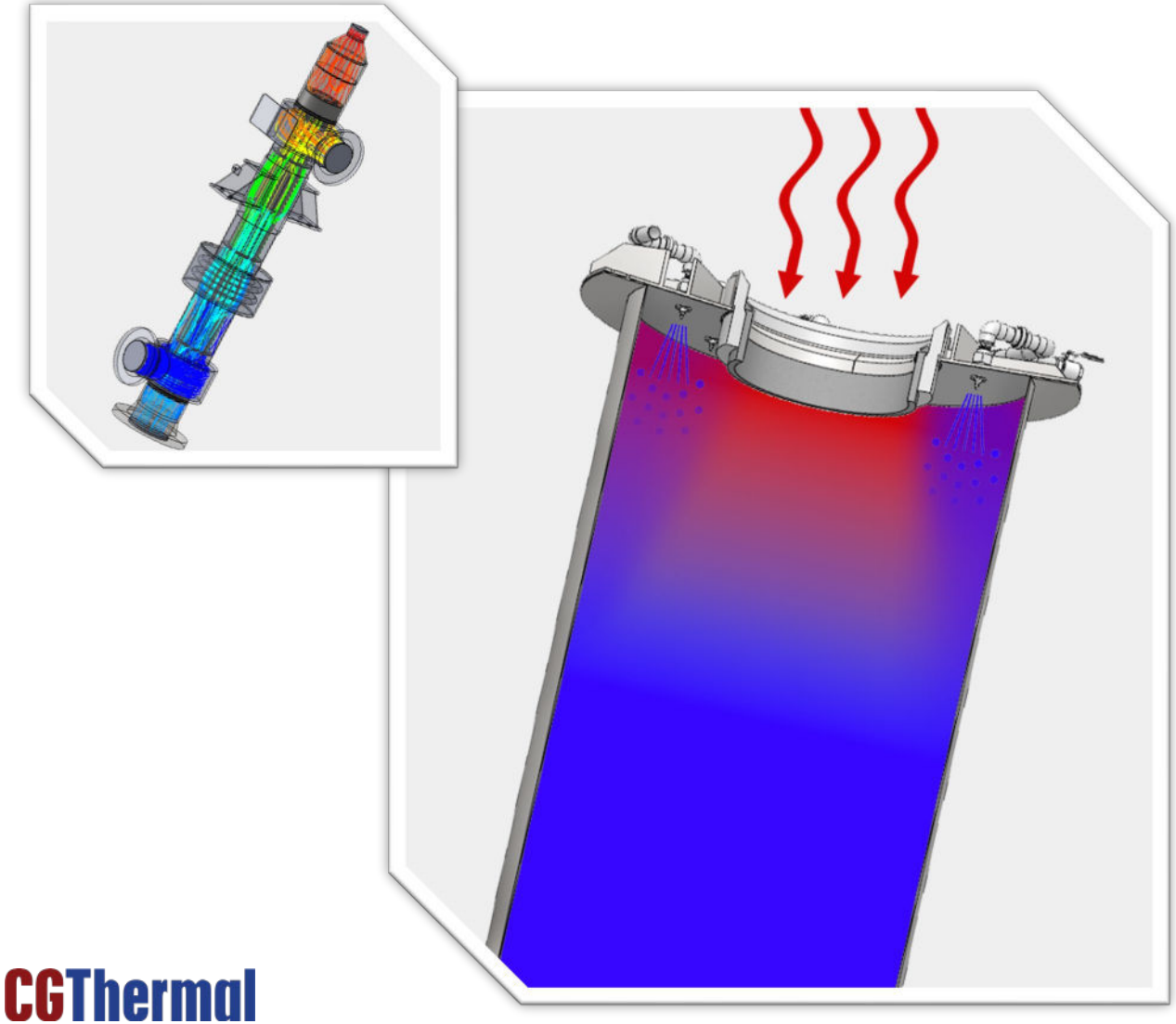
# Nickel-based Alloys

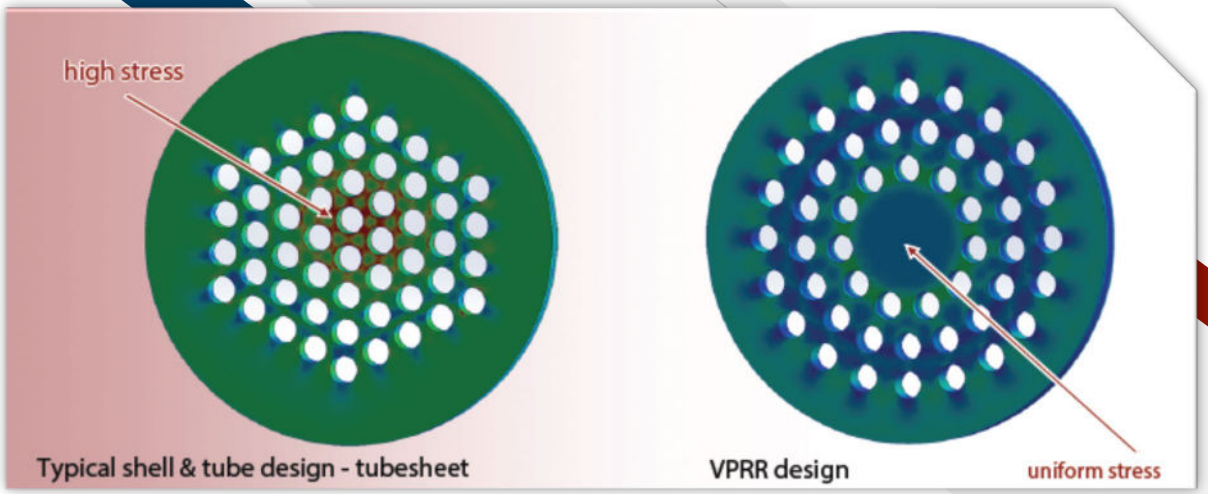
## AirBTU.VPRR / HTXP / Quench Lid Advanced

- Well suited for **high-temperature gas to gas** applications.
- Can operate in excess of **2000 Deg F temperature**
- Highly Engineered to avoid stress failures, hot spots, and cold-end corrosion.

CGThermal

# High-Temperature Engineered Solutions






## AirBTU.VPRR / HTXP / Quench Lid Advanced

- Well suited for **high-temperature gas to gas** applications.
- Can operate in excess of **2000 Deg F temperature**
- Highly Engineered to avoid stress failures, hot spots, and cold-end corrosion.

CGThermal

CGThermal
Process Technology Solutions
for Harsh and Corrosive Process Streams

## *Our Expertise*

Heat/mass transfer
Fabrication of Process Equipment
Process Design

## *Our Values*

Listening and Transparency
Commitment to Customer/Project success
Commitment to Innovation

## *Your Best Solution*

# CGThermal

## Process Technology Solutions

for Harsh and Corrosive Process Streams