

# **GAUMER<sup>®</sup> PROCESS**

50+ Years of Excellence



**Electric Process Heaters & Engineered Systems**

# Company Info

**G**aumer Process is a world leader in the design and manufacturing of electric heaters, controls and engineered systems, since 1962. Solutions are provided according to all international rules and regulations.

## Engineering

- Optimized solutions
- CFD & FEA (mechanical & thermal) analysis
- Hysys process simulation
- 3D plant modeling
- Flow modeling
- Extensive material testing
- Dedicated R&D group
- Registered professional engineers

## Innovation

- ▶ Industry firsts
  - 1975 – safety contactor for heater control
  - 1978 – manual reset for heater OTC
  - 1982 – buffer tank for hot oil system longevity
  - 1983 – control panel external heat sink
- ▶ Patents
  - Infi-seal™ heater moisture protection – 7,554,064
  - Renewable heater standoff housing – 7,318,745
  - 4160 Volt electric resistance heaters – 7,372,007
  - Fuel gas conditioning – multiple
  - Optimized heat transfer (AT technology) – 8,295,692
  - Subsea hydrate remediation & prevention – pending
  - Low flow gas heater – pending
  - Vessel wall temperature reduction – pending



## Quality

- ASME VIII Div 1
- ASME IX
- ATEX
- AWS D1.1
- CRN
- CSA
- cUL
- GOST
- IECEX
- ISO 9001
- PED
- UL

## Facility

- ▶ State of the art campus in Houston, Texas USA
  - 14,000 sq ft heater fabrication & test
  - 10,000 sq ft control panel fabrication & test
  - 16,000 sq ft material preparation
  - 46,000 sq ft systems fabrication, 30 foot crane hook height
  - 20,000 sq ft office space
  - 4160 Volt heater test facility

## Service

- Expedited design and manufacturing
- Dedicated field start-up & commissioning assistance
- 24/7 emergency support
- Experienced project management
- Large spare parts inventory for immediate shipment
- Export crating and delivery
- Repair all manufacturers' electric heaters

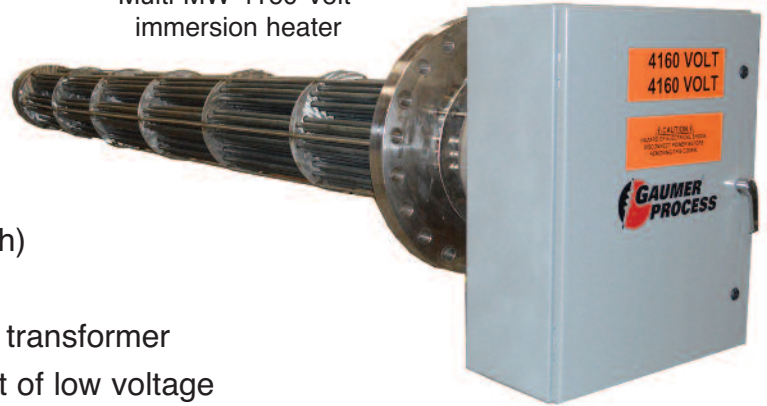


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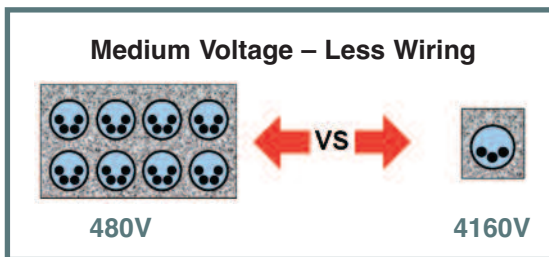
# Medium Voltage Heaters & Controls

Multi-MW 4160 Volt immersion heater



## Benefits

- Large duty 500kW - 30MW (100MBtu/h)
- Zero CO<sub>2</sub> and NO<sub>x</sub> emissions
- Easy installation - 90% less wiring, no transformer
- Full thyristor controls - 1/3 the footprint of low voltage

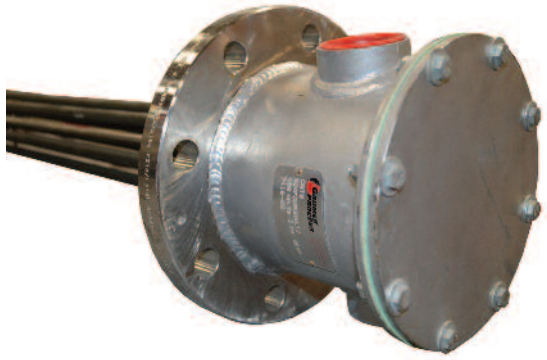


Multi-MW 4160-6600V thyristor control



Subsea heater - 5000V, 3500m depth

# Immersion Heaters - Standard

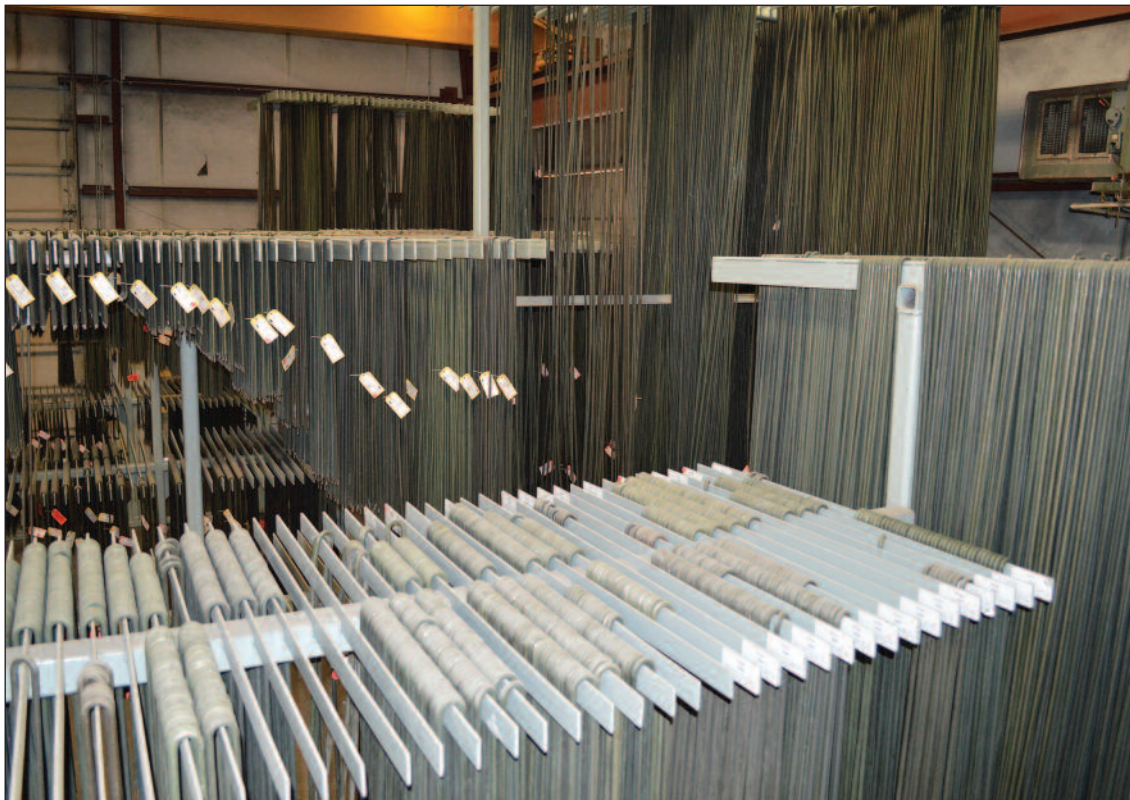


## Benefits

- All raw materials in stock
- Immediate fabrication release
- Fast delivery
- Expedited overnight production available

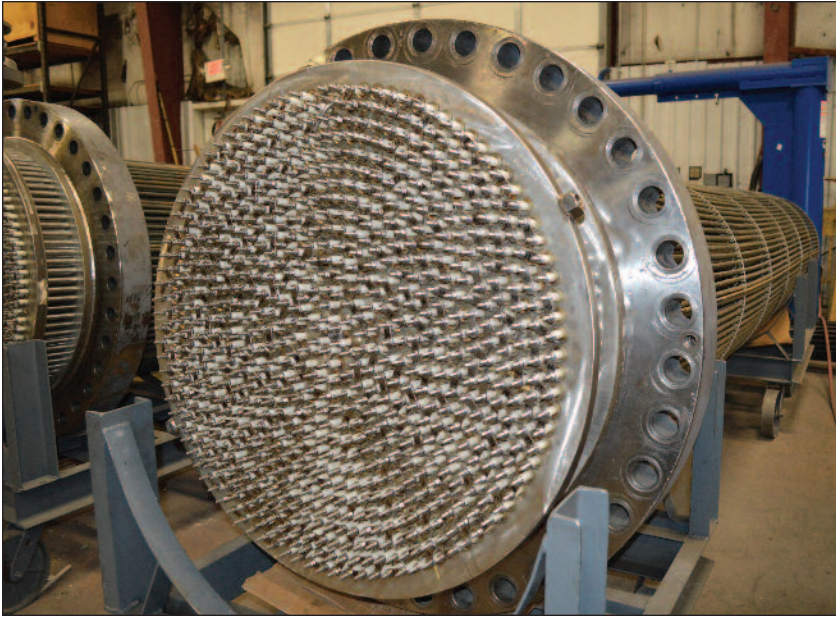
## Products

- Flange heaters (3" - 12" ANSI)
- Screw plugs (1.0" - 2.5" NPT)
- NEMA 12, 4 or 7 housings
- Watt density and length for application

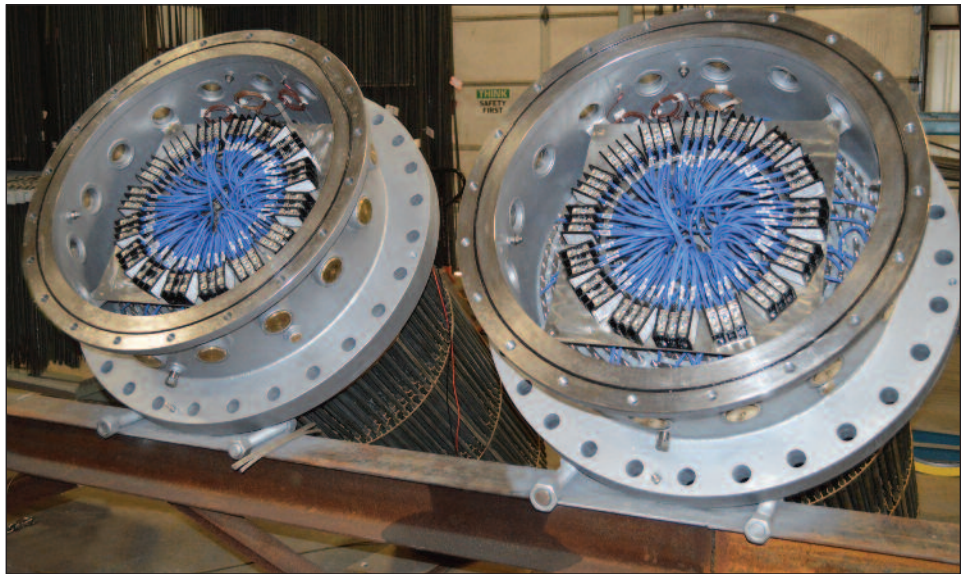


Multi-million dollar tubular element inventory

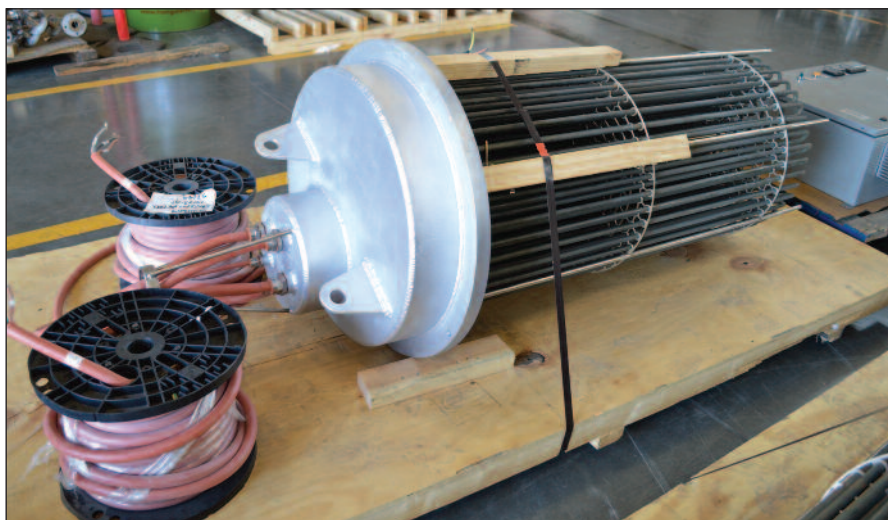
# Flanged Heaters - Custom



3500kW CSA Class 1, Zone 2 standoff heaters



ATEX pre-wired distribution blocks

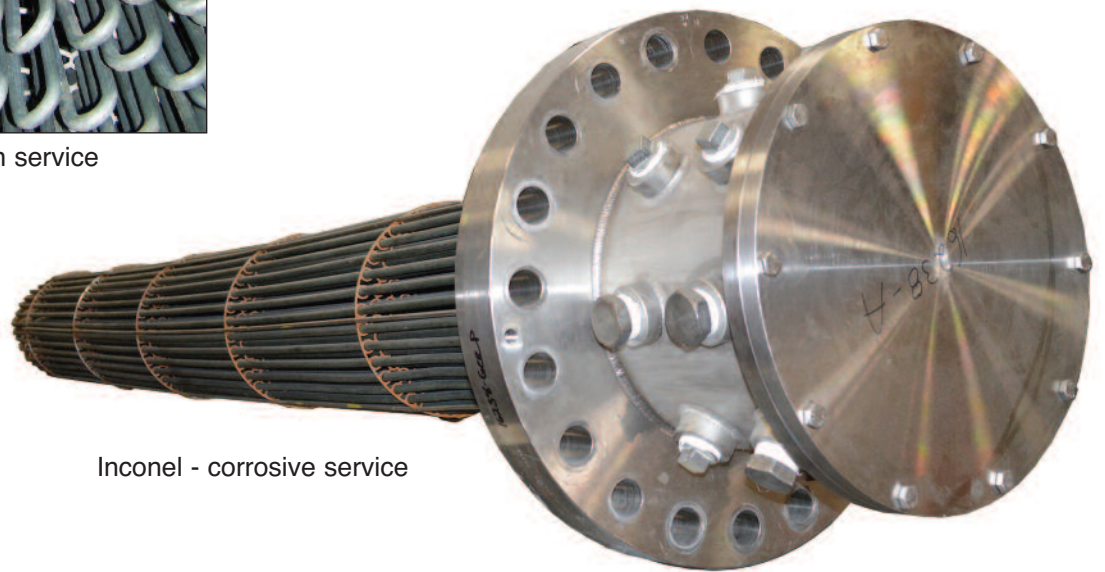


Submersible asphalt heater

# Flanged Heaters - Custom



36" heater for oxygen service



Inconel - corrosive service



Angled turbulators - optimum heat transfer

# Circulation Heaters



ASME certified  
for non-hazardous



NACE compliant for sour service



ATEX certified for Middle East



NEMA 7, 1MW, CRN



High pressure wellhead service



Diesel fuel oil heaters



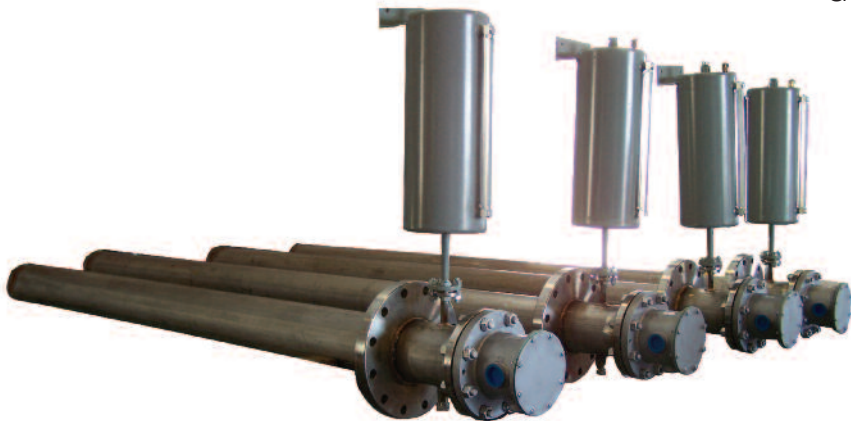
# Pipe Insertion Heaters

## Benefits

- Indirect Heating
- Heater removal without process interruption
- Filled with air or heat transfer fluid



GOST - 10 meter length Inconel 600



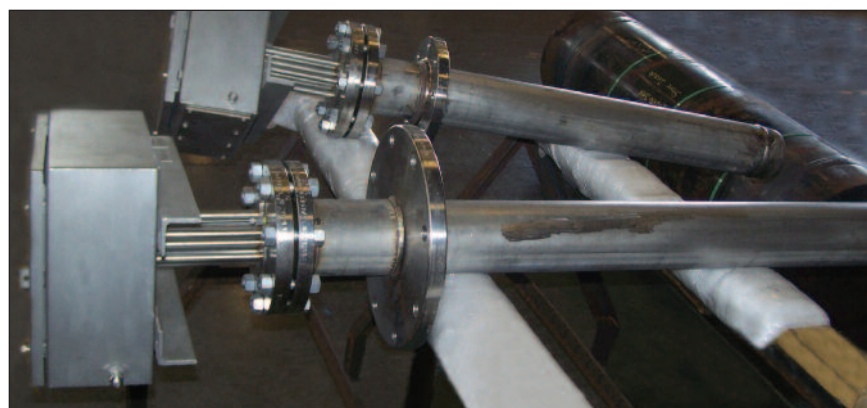
Filled with heat transfer fluid



Indirect molten salt

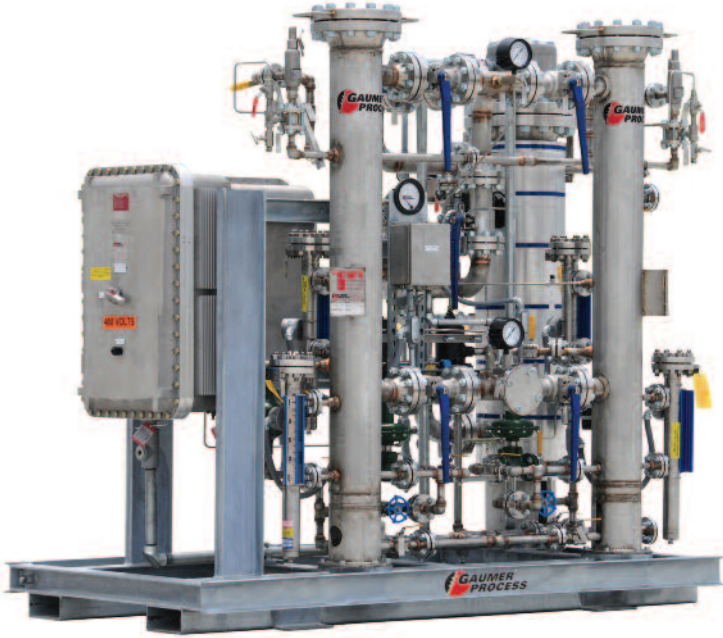


CSA zone 2 offshore critical tank heating



ATEX standoff bayonet

# Fuel Gas Conditioning



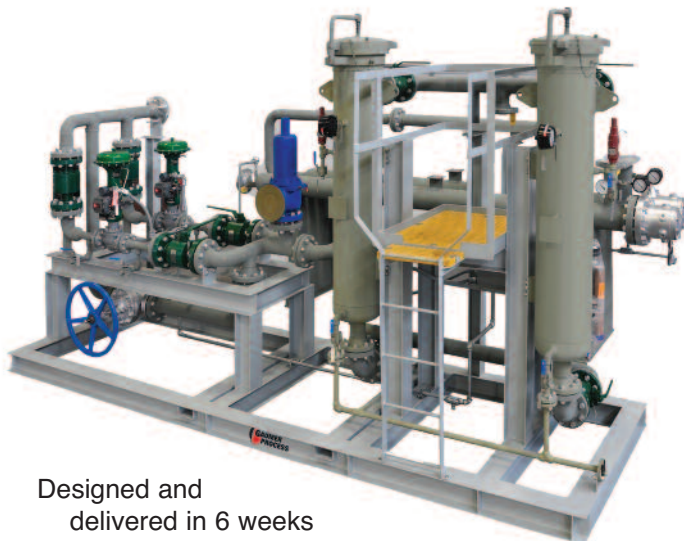
Mobile, trailer mounted FGCs - 13MW turbines



Upgrade to satisfy California emission standards



Protects 12 Wartsila 18v50SG engines



Designed and delivered in 6 weeks



Production platform off Trinidad & Tobago

# Fuel Gas Conditioning



Australian power plant - 100MW turbine



Onshore oil production  
- 45MW turbine



Peaking power generation - 60MW turbine



Fuel gas system for 2 GTs combined & 1 GT simple cycle

# Control Panels



NEMA 4X purge with sun shield



Custom for hydrotest chamber



ATEX certified



cUL 3200A SCR panel with buss bar

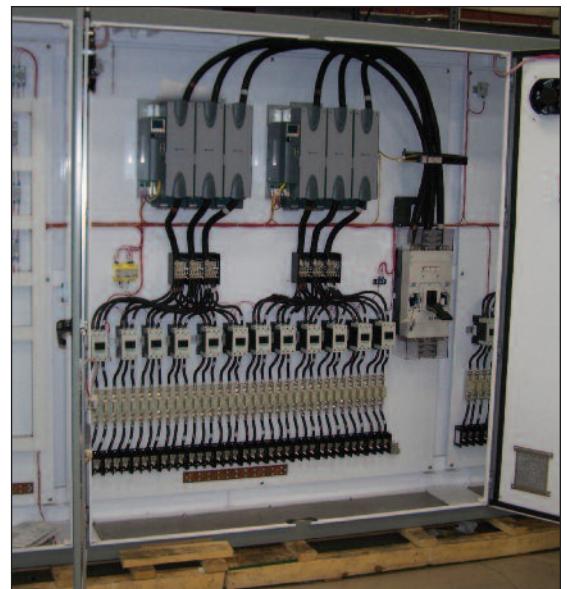
# Control Panels



Redundant NEMA 7 panels for un-manned compressor station



Power plant - multi-MW with air conditioning

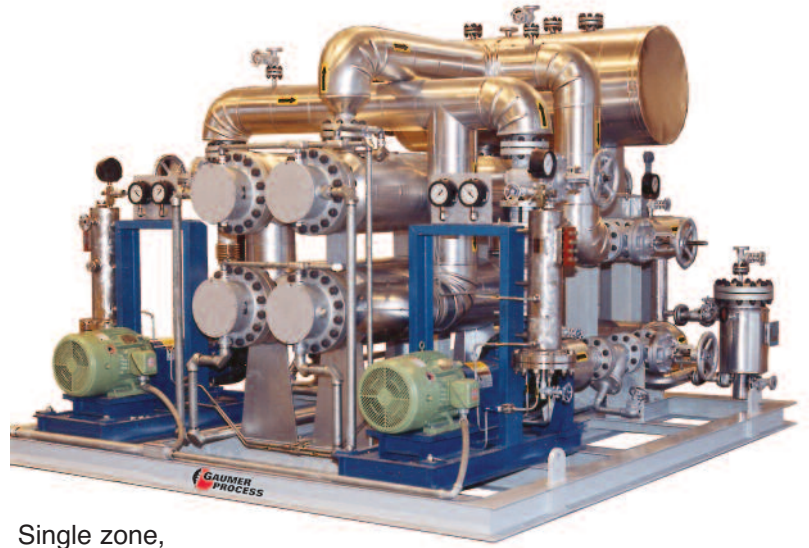


Full thyristor control

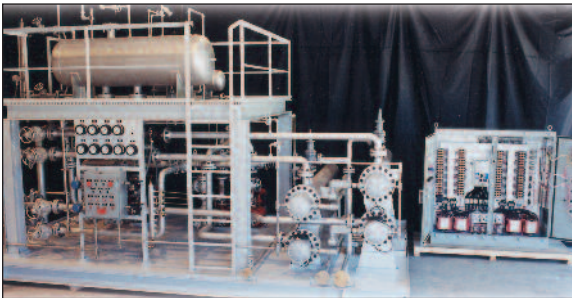
# Hot Oil Systems



Multi-zone for Class 1 Div 1



Single zone,  
100% SCR for extruder plant



Dual zone, canned motor pump,  
hazardous location



Dual zone, mag drive pump for petrochemical



Rental fleet for immediate delivery



Band heaters - hydrotest chamber



Multi zone hot air



Wide-open monitor PCV arrangement

# Engineered Systems



U.S. Coast Guard shipboard use



Staircase to Australian standards



Seal gas conditioning



Liquid fuel forwarding





Multi-zone hot water for Sakhalin Island, Russia



Dowtherm vaporizer



Fuel gas, double block & bleed

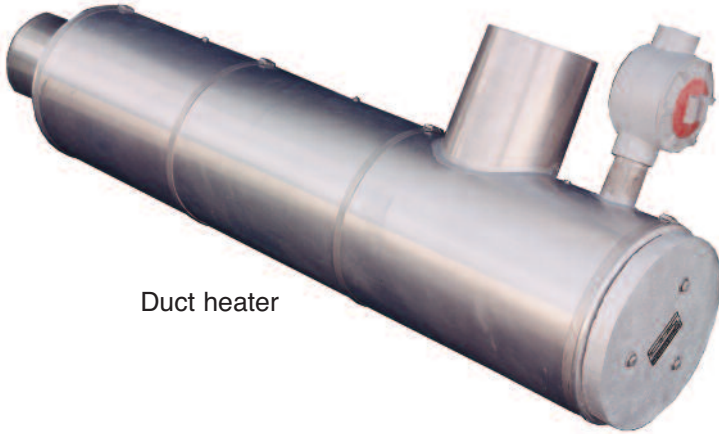
# Specialty Heaters



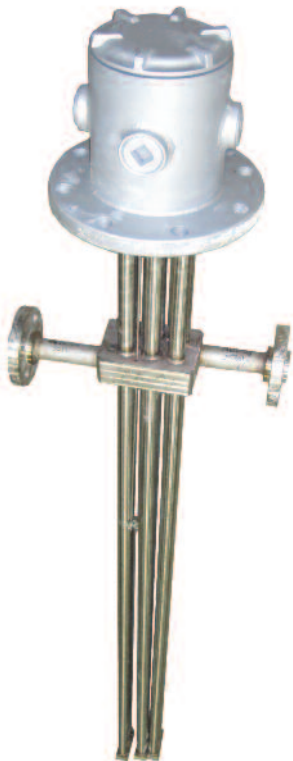
Screw plug heaters



Over-the-side heater



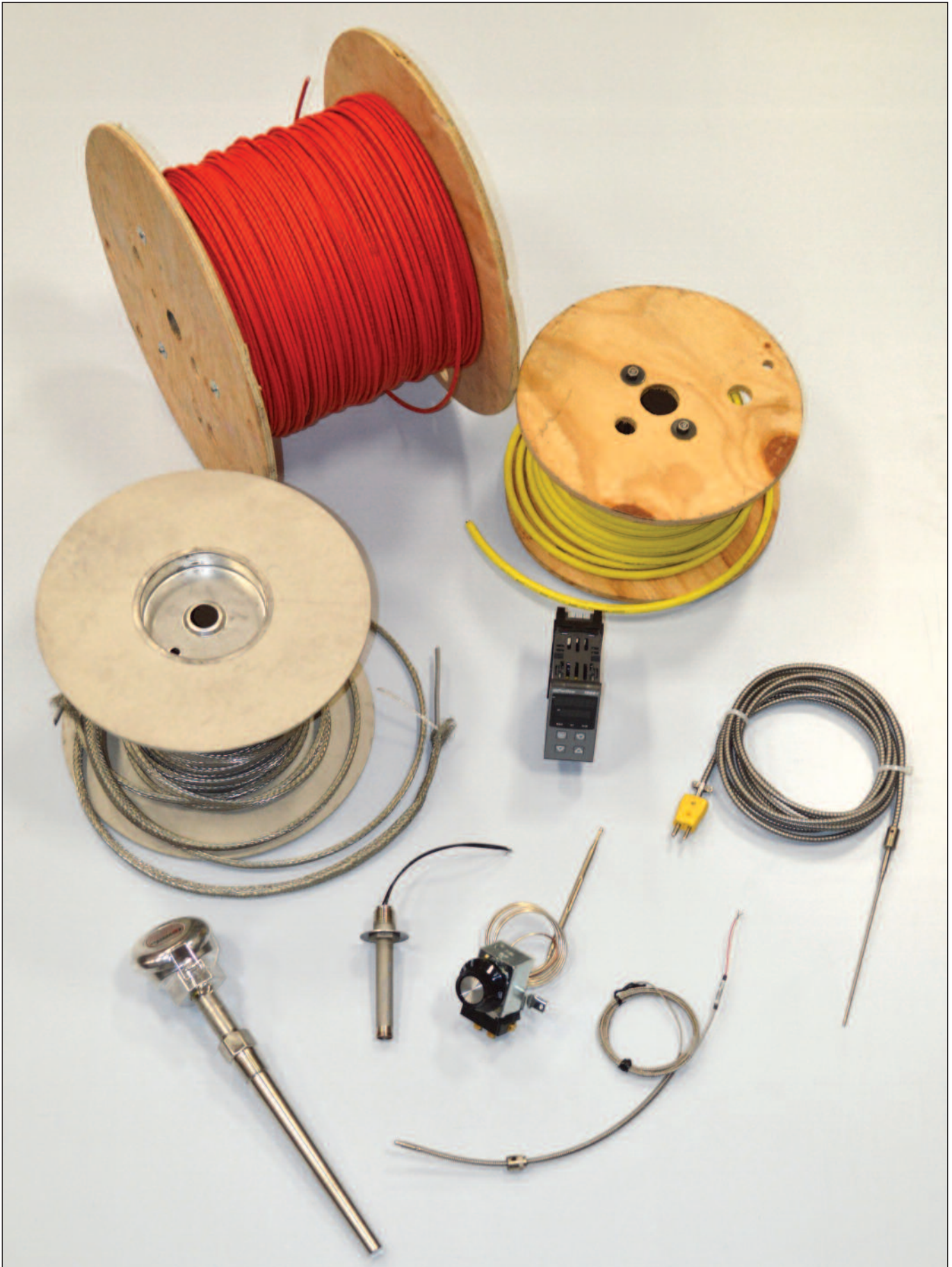
Duct heater



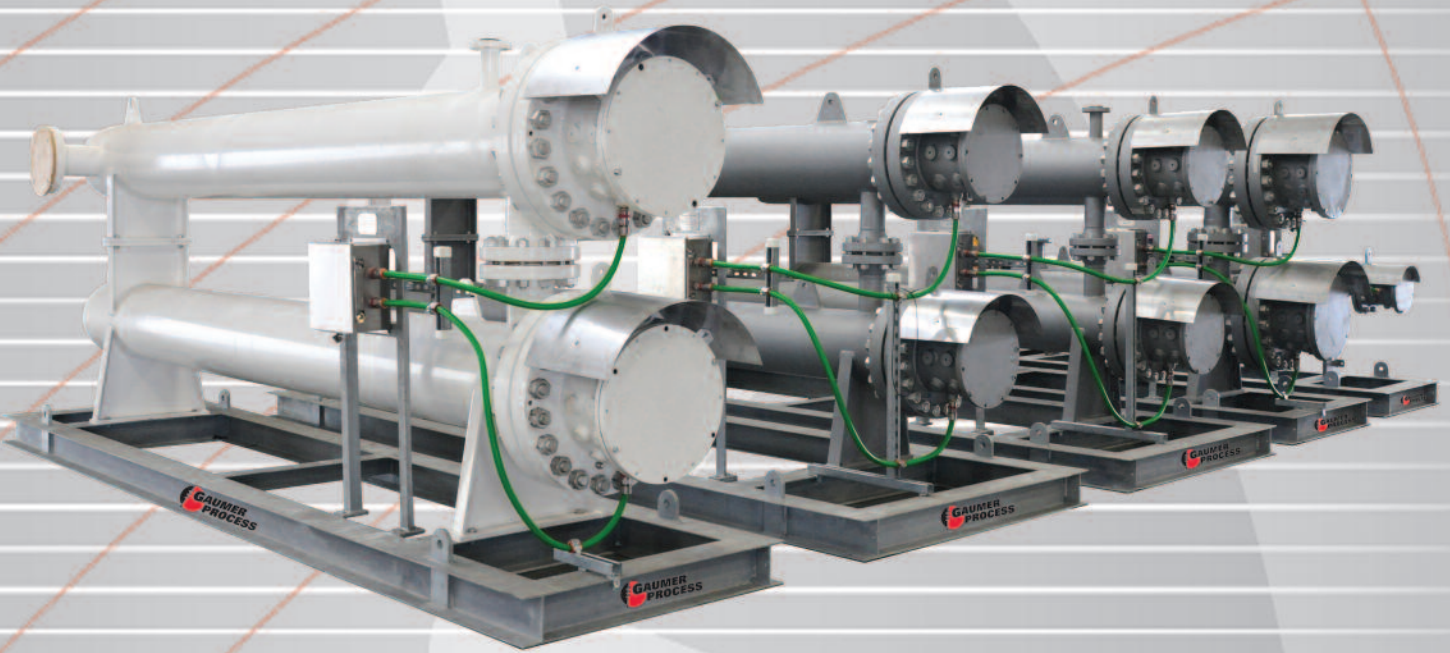
Low flow gas heater



Cartridge, band, enclosure, strip, finned strip, formed tubulars



High temp wire, heat trace, thermocouple, thermowell, heat detector, thermostat, temperature controller



Since 1962

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