INTRODUCTION

With our key competency in Electric Process Heating System, DFINITI has evolved through the years into other thermal solutions. With part of our logo resemble a key and our tag line ‘The Key to Thermal and Process’, we are differentiated by offering complete solution not just on ELECTRIC HEATING, but also other type of thermal solutions and process. This provides you with “One-Stop Shop” for all your thermal requirement.

In association with our business partner, we also offer Process Equipment which are integrated with heating requirements to provide a complete solution to our clients.

OUR SERVICES

- Technical Support
- Detail Design and Engineering
- Project Management
- Documentation
- Certification to meet regulatory requirement.
- Procurement
- Fabrication and Assembly
- Inspection and Testing
- Site visits and services
- Pre-commissioning, Commissioning,
- Start-up and Troubleshooting
- On-site modification and repair
- Provide common spares in stock
- Training
INDUSTRIES WE SERVE

- Oil and Gas
- Offshore and Marine
- Petrochemical and Refinery
- Power Generation
- Industrial Processing Plant
- Food Processing
- Pharmaceutical
- Aerospace

CERTIFICATION AND DESIGN STANDARD

Our products are certified with ATEX and IECEx for hazardous area application.
Area classification: Zone 1, Zone 2
Temperature class: T1 – T6
Gas Group: IIA/IIB/IIC
Ingress Protection: IP66

Products are designed to ASME VIII, PED, GB or other standards as required. On Marine Classification, we meet the requirement of ABS, DNV, BV and alike.

Our companies are certified to ISO9001:2015
We provide standard and customization products and solutions. In association with business partners, we can provide solutions for other process related equipment and Well Head Control Panel.

**a. Electric Process Heating System**

The most common process heating is found in Gas Dehydration and Fuel Gas Conditioning System. We provide customization solution to meet the process demand with duty regulates by Thyristor and/or Contactor using hardwired or PLC controlled.

- Supply Voltage: max 690VAC
- Power: up to 5000KW in a single unit
- Certification: ATEX/IECEx, Exd/Exe IP66 T1-T6
- Gas Group: IIA/IIB/IIC
b. Electric Immersion Heating

The Electric Heater is to heat the medium in the tank to reduce viscosity at desired temperature for ease of flow or pumping out of the medium. The medium can be condensate, bitumen, chemical or any sludge collected in the sump tank.

Beside the conventional design, the heater can be designed with withdrawable element which allow replacement of heating element without draining the tank to offer quicker turn-around time. This is also called online replacement.

For underground tank design where only access is from the top, L-shape heater can be provided.

- Supply Voltage: max 690VAC
- Power: up to 5000KW in a single unit
- Certification: ATEX/IECEx, Exd/Exe IP66 T1-T6
- Gas Group: IIA/IIB/IIC

c. Vaporizer

This relates to cryogenic application where the heater will heat the very low temperature liquid and vaporize it.
d. Water Bath Heating

While direct heating can be more efficient and cost effective, there are instances where indirect heating has its place and has cost advantages over direct heating.

Water Bath is indirect heating where it heats up the water in the tank and the hot water transfer heat to the process pipes running through it. It is cost effective for high pressure application where the tank and heater design at atmospheric and only the pipe cater for high pressure process.

- **Type of Heat Source**: Electric or Fire (burner)
- **Capacity**: design to meet
- **Control**: Local Contactor control (Electric) BMS (burner)

![Water Bath Heating Image]

e. Hot Water Calorifier

Hot Water Calorifier is akin to the Hot Water heater at home. It is used for hot water supplies for living quarters mainly in offshore application. Our advantage of being able to supply complete with in-built heater.

- **Design Code**: ASME VIII Div 1 PED, AS1210 or other relevant code
- **Tank Material**: SS316/316L
- **Element Material**: SS316L, Incoloy etc

![Hot Water Calorifier Image]
f. Auxiliary Steam Generator (Electric)

Auxiliary Steam Generator is also called Auxiliary Steam Boiler. With the term ‘auxiliary’, it is not meant to be the main boiler. Instead, it usually provides steam for the start up of the power plant.

DFINITI can design and supply the Auxiliary Steam Generator with Superheater to superheat the steam over 200 deg C for propulsion application.

g. Air Duct Heating

Air Duct Heating can be used for comfort during winter where hot air is supply through the ducting. It can also be used for processing in food industries as dryer to keep the moisture out.

Duct heater can be designed with finned type element for high thermal efficiency, housed in a robust enclosure to reduce vibration and noise.
h. Braking Resistor

Unlike a heater where heat is generated for a purpose, Braking Resistor works the reverse where excess energy is being dumped through resistor as load bank.

The resistor can be water-cooled or air-cooled, arranged in single or multiple bank units. The resistors are designed specifically for high voltage to meet the Marine classification requirements.

- Supply Voltage: max 1500VDC
- Power: up to 5000KW in a single unit
- Configuration: Single or multiple units
- Certification: Can be safe area or hazardous area

i. Hot Oil Heating System

Hot Oil Heating provide circulating heat source, usually in a large tank where direct immersion heating is not practical.

With associate, we supply complete Heating system including the burner and BMS.

- Type of Heat Source: Electric or Fire (burner)
- Capacity: design to meet
- Control: Local Contactor control (Electric)
  - BMS (burner)
j. Process Internals

With the support from our business associate and based on years of design experience and operational feedback, we can provide the following Process Internals:

**HORIZONTAL SEPARATORS**
- Inlet Deflectors
- Multi-Vane Distributors
- Perforated Baffles
- Groove Baffles
- Coalescer Plate Packs
- Mesh/Vane/Cyclone Demisters
- Foam Breakers
- Wave
- Sand Jet Systems
- Vortex Breakers

**VERTICAL SEPARATORS**
- Inlet Deflectors
- Multi-Vane Distributors
- Mesh Demisters
- Vane Demisters
- Axial & Radial Cyclones
- Vortex Breakers

**ELECTRIC DEHYDRATION/DESALTING**
- Transformers
- Grinds
- Insulated Hangers
- Entrance Bushings
- Inlet Distributors
- Oil Collectors
- Sand Jet Systems
- Emulsion Removal Devices
k. Crude Oil Processing

High efficiency three-phase separators, crude oil thermal treaters, crude oil electrostatic dehydrators and desalters etc, to meet the needs of crude oil processing requirement by customers.

MAIN PRODUCTS

- Production/metering manifold
- High efficiency separator for high-viscosity and condensate oil
- Crude oil thermal treater
- Three phase production separators
- Two phase production separators
- Test separator
- Crude oil electrostatic desalter
- Crude oil electrostatic dehydrators
- Slug catcher with finger type
- Slug catcher with vessel type
- Free water separator
- Crude oil stabilizer
- Condensate oil coalescer
ENQUIRY FORM  
(Electric Heating)

SCOPE OF SUPPLY
Heater bundle:  
Shell/Vessel:  
Control Panel:

DESIGN INPUTS
(send us datasheet if available)

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MATERIAL OF CONSTRUCTIONS (MOC)
(Please provide these information for more accurate pricing)

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YOUR CONTACT

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Send your enquiry to sales@dfiniti-t.com