



Applicable Design Codes and Standards:

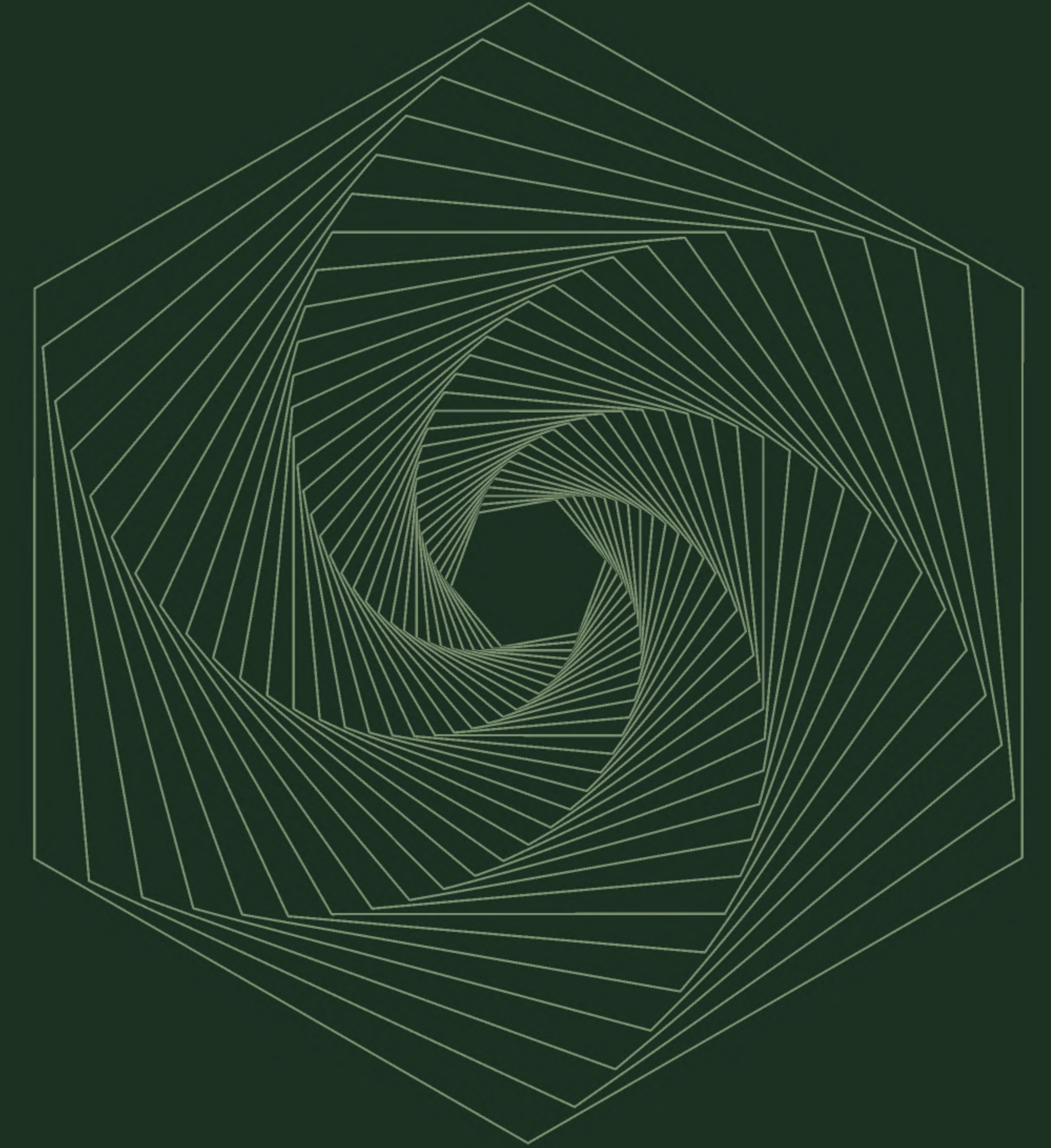
ANSI-API 580, API 630, API-RP530, API535, ANSI-API 12K

Design Software's:

FRON - 5PC , SAP, TEKLA

MFS

Masnouat
Felezi Sangin



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DIRECT FIRED HEATERS

MFS-CO.COM

DIRECT FIRED HEATERS FURNACES

A Direct Fired Heater (Furnace Heater) is a style of heater in which the burners provide hot gasses that transfer their heat to a process liquid or gas flowing directly through coils installed inside.

With the help of our well-known European partner, MFS is a highly qualified and well-referenced designer and supplier of fired heaters. A typical API 560 fired heater consists of a radiant section, a convection section, stack, burners, a fuel skid, and a control system.

As both combustion and heat transfer company, MFS is uniquely placed to achieve the best possible outcomes with high thermal efficiencies, low emission, reliable operation, and state-of-the-art burner management systems (BMS). MFS provides virtually every type of refinery heaters and is definitely a reliable company to design and supply the proper heater for your service.

MFS provided burners for the heaters can be single/dual fuel, low NOx, have sufficient turn-down ratio according to project requirements and contain reliable flame detection system.

In order to increase the thermal efficiency of the heaters, Air preheater (APH) can be considered through which combustion air is heated by combustion products, steam, or other fluid. MFS provides different kinds of Air-preheaters such as Plate Type, Cast-Iron type Etc. to meet the project requirements.

MFS SUPPLIES HEATERS WITH REQUIRED INSTRUMENTS SUCH AS:

- Flue Gas Analyzers
- Flame Scanners
- Thermowells
- Tube Skin Thermocouples Etc.

THE PROVIDED HEATERS CAN BE
EQUIPPED WITH FUEL SKID. IN THE FUEL GAS SKID
CONTAMINANTS AND LIQUIDS FROM THE FUEL GAS STREAM
WILL BE REMOVED AND FUEL PRESSURE WILL BE
REGULATED TO BE USED.

THE MFS HEATERS APPLICATIONS CONSISTS:

- | | | |
|-----------------------|-------------------------|------------------------|
| • Crude Oil Heaters | • Hydrodesulphurization | • Oxygen & Gas Heaters |
| • Vacuum Heaters | • Reboilers | • Hot Oil Systems |
| • Catalytic Reforming | • Steam Superheaters | • Charge Heaters |
| • Hydrotreating | • Regeneration | • Hydrocracking |

MFS SUPPLIED HEATERS HAVE DIFFERENT CONFIGURATIONS:

- 1. STRUCTURAL CONFIGURATION:**
 - a. Vertical Cylindrical
 - b. Box type
 - c. Cabin
 - d. Multi Cells box or cylindrical

- 2. TUBE CONFIGURATION:**
 - a. Vertical
 - b. Horizontal
 - c. Arbor
 - d. Helical

- 3. BURNER ARRANGEMENT:**
 - a. Up-fired
 - b. Down-fired
 - c. Side wall, End wall and Multilevel

- 4. COIL MATERIAL:**
 - a. Carbon Steel Coil
 - b. Chromium-Molybdenum (Cr-Mo) Coil
 - c. High Alloy Steel (304 ~ alloy 800H)

