



# STAINLESS FABRICATION, INC.

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## HEAT TRANSFER SURFACE

**SFI provides various options** to support a wide range of heating and cooling requirements. We work with our customers to design the best solution for the application while keeping costs down and efficiencies up.

- Dimpled heat transfer surface
- Half pipe
- Full internal pipe coil
- Open jacket
- Heat trace, cables, blankets
- Jacketed construction
- Insulation
- Sweep and scrape mixers
- Thermometers and controls



**Preformed Dimple**



**Internal Pipe Coil**



**Half Pipe**

### Typical Materials of Construction

#### Dimpled HTS:

- 14 gauge with 2" x 2" spacing.
- 304 or 316L stainless steel, standard

#### Half Pipe and Full Pipe Coil:

- Half pipe is formed from 10 gauge sheet or Sch 40 pipe.
- Full pipe is coil formed from Sch. 40 pipe.
- 304 or 316L stainless steel.
- 2" dia. (min. 21" finished dia.)
- 3" dia. (min. 30" finished dia.)
- 4" dia. (min. 36" finished dia.)

Half pipe for bottom heads is formed from Sch. 40 pipe and cut in half while half pipe for the sidewall is formed from sheet into a true 180° half-circle.

#### NOTES:

- Materials such as 2205, AL6XN and Hastelloy are available by special order.
- Other pipe diameters are available.

SFI Engineers perform structural ASME and custom computations such as flow rate, pressure drop and process calculations to ensure the vessel, with the given utility limitations, will meet customer process needs. Some variables being considered:

- Will there be multiple batch sizes in the same tank?
- What are the site limitations of the recirculation pump?
- What is the product temperature range, the amount of time allotted to achieve this and the supply temperature of the heating/cooling media?
- Is there a requested temperature drop/rise of the heating/cooling media?
- Will the vessel be agitated or insulated?
- Are there other internal thermal reactions that are occurring?

SFI personnel will consider these questions and more to propose a solution that will meet customer requirements and applicable Codes, operate efficiently, and be cost effective.