



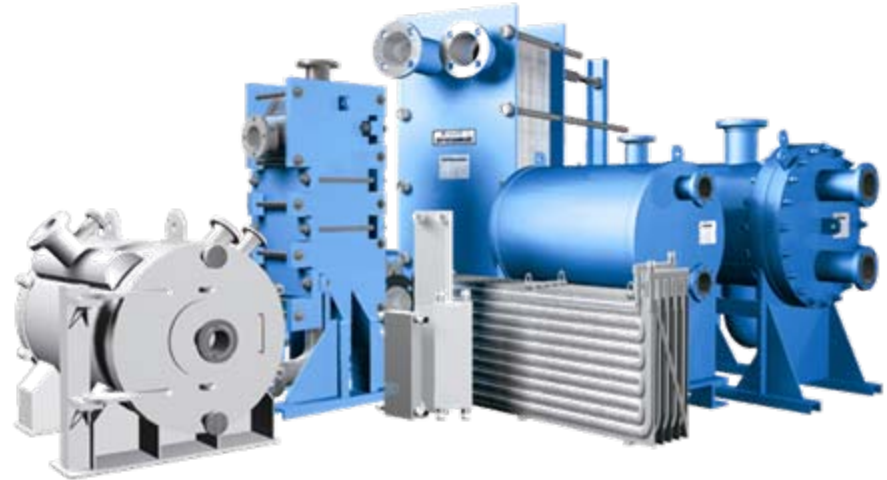
Presentation to



SMU | GEOTHERMAL
LABORATORY

Dallas, Texas
Tuesday, November 3, 2009

Presented by: *Jody Stonecipher*



Tranter Manufactures HE's at Facilities That Best Serve Our Customer's Global Interest!

Global Operations:

Tranter, Inc. USA

Tranter GmbH

Tranter AB

Tranter India Pvt. Ltd.

Tranter, Ltd.

Tranter Ind. e Com de Equip. Ltda

Tranter China

Tranter Mexico

Wichita Falls, Texas

Artern, Germany

Vänernborg, Sweden

Pune, India

Wakefield, England

Sao Paulo, Brazil

Beijing & Shanghai

Queretaro, Mexico

Each Production facility serves as a sales & service facility
All Facilities adhere to ISO 9001 requirements and can provide local and regional code requirements, such as ASME, CRN, PED, CE, China SQL, etc.

Today's Topic:

Shell & Tube vs “Shell & Plate”

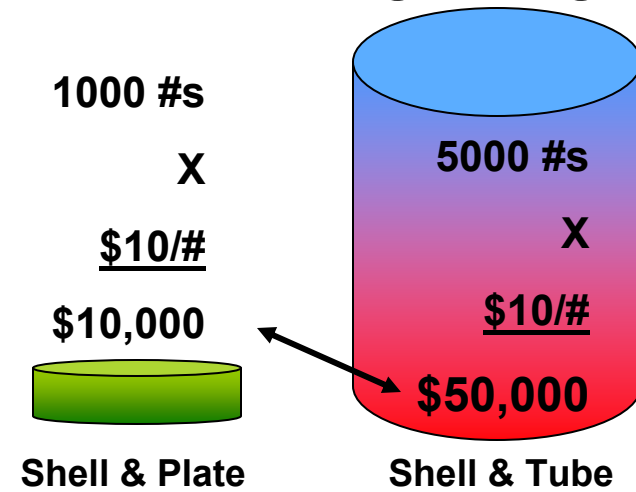


Shell & Tube Vs Shell & Plate

Potential advantages to analyze:

- Refrigerant hold-up volume (\$\$)
- Space & weight for skid layout
- Costs for exotic alloy requirements
- Combine preheater & evaporator for small applications
- Close pinch point / temperature approach
- Tranter company owned service centers

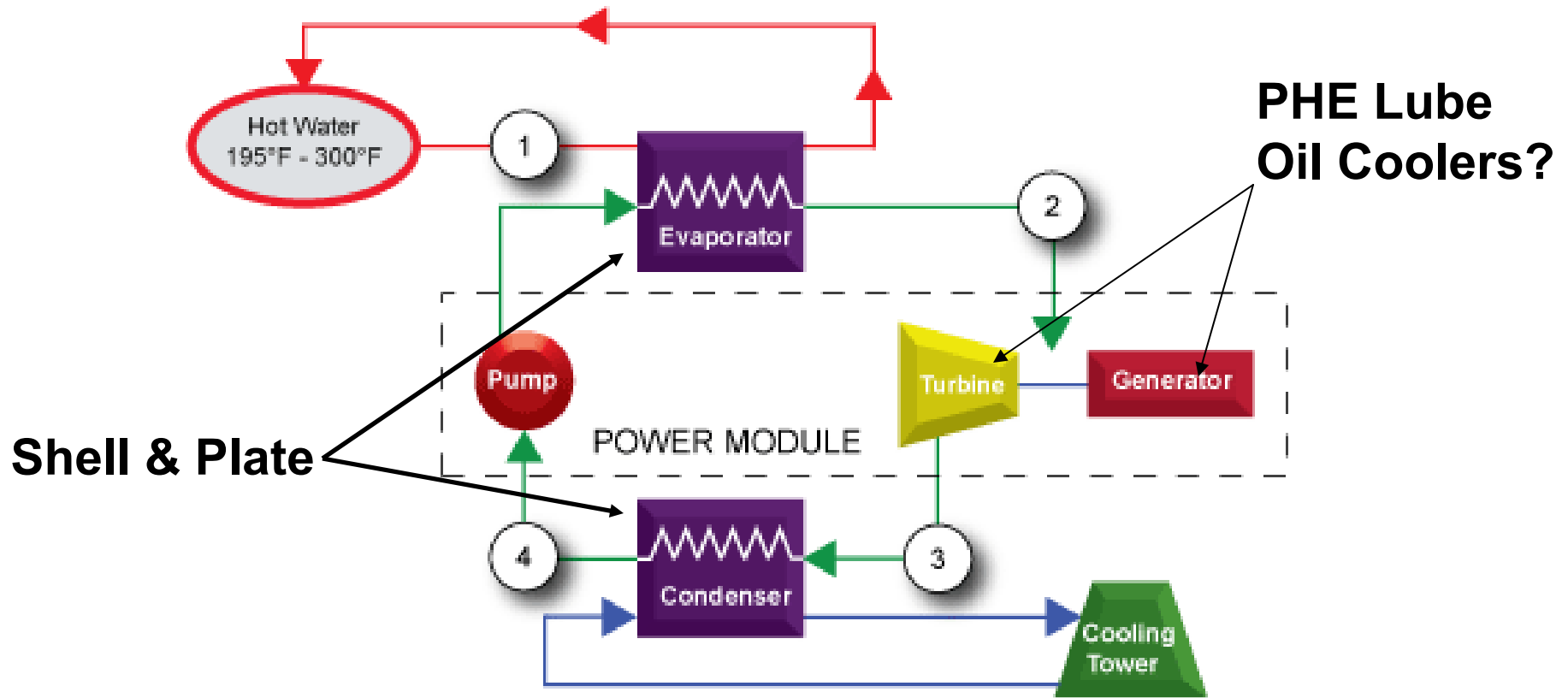
Potential Refrig savings






Financial Implications:

- IRR ↑
- Payback Time ↓
- NPV ↑

Common Schematic for ORC Skid



Key	
	= hot water
	= working fluid
	= cold water



Shell & Plate



What is a Welded PHE?

It is Plate Heat Exchanger (PHE) technology -

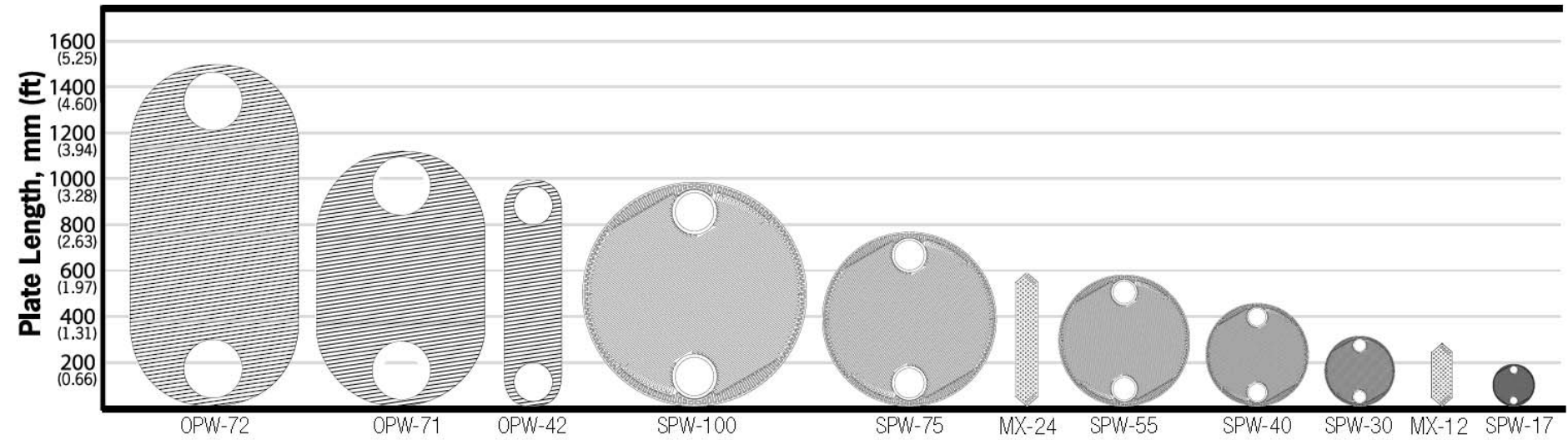
- Chevron, dimpled, washboard or virtually any cold-formed plate
- Elastomeric gaskets are **NOT** used to **prevent** intermixing of fluids
- Higher pressure (100+ bar) and temperature allowance than GPHE
- Eliminates compatibility issues between fluids and gaskets

Its not a brazed HE

- Brazing Materials
 - Copper
 - Nickel
 - CuproNickel

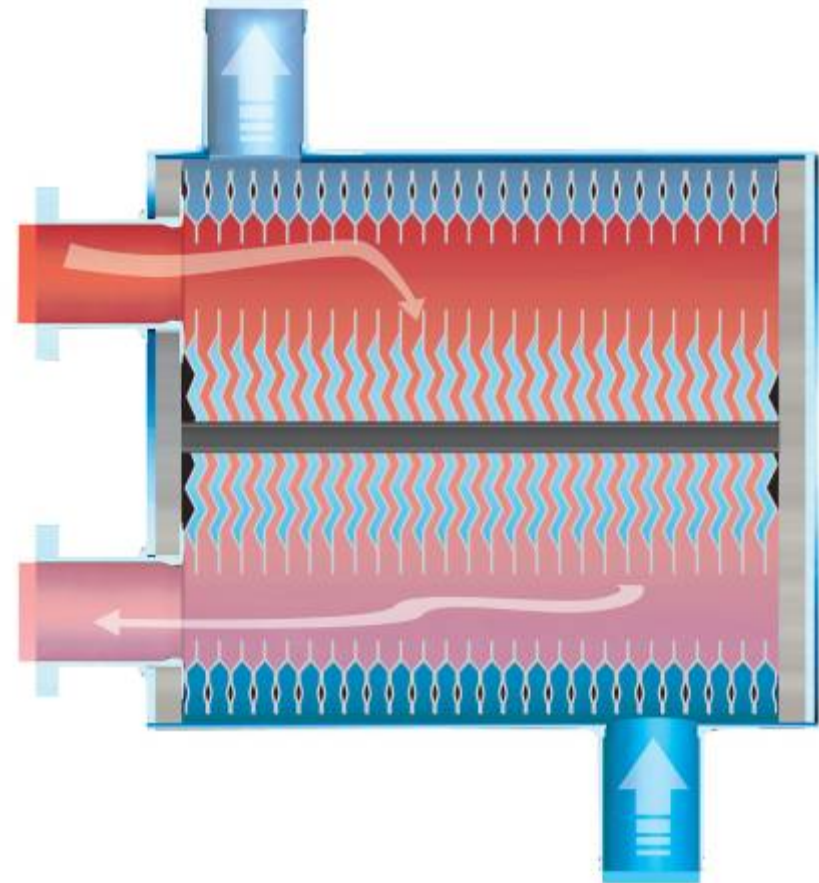
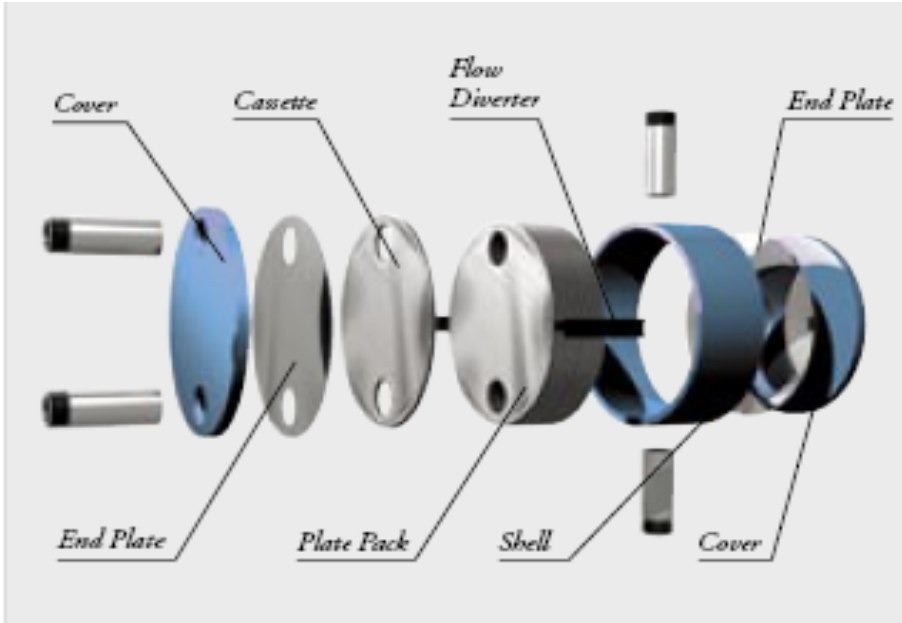


Welded Heat Exchanger Plate Range



Tranter welded PHE applications span a wide range of capacities and fluid properties.

SUPERMAX[®] Features



Counter-current fluid flow – enables a 2° APPROACH TEMPERATURE!

Accordion like cores facilitates thermal and mechanical fatigue

SUPERMAX[®]

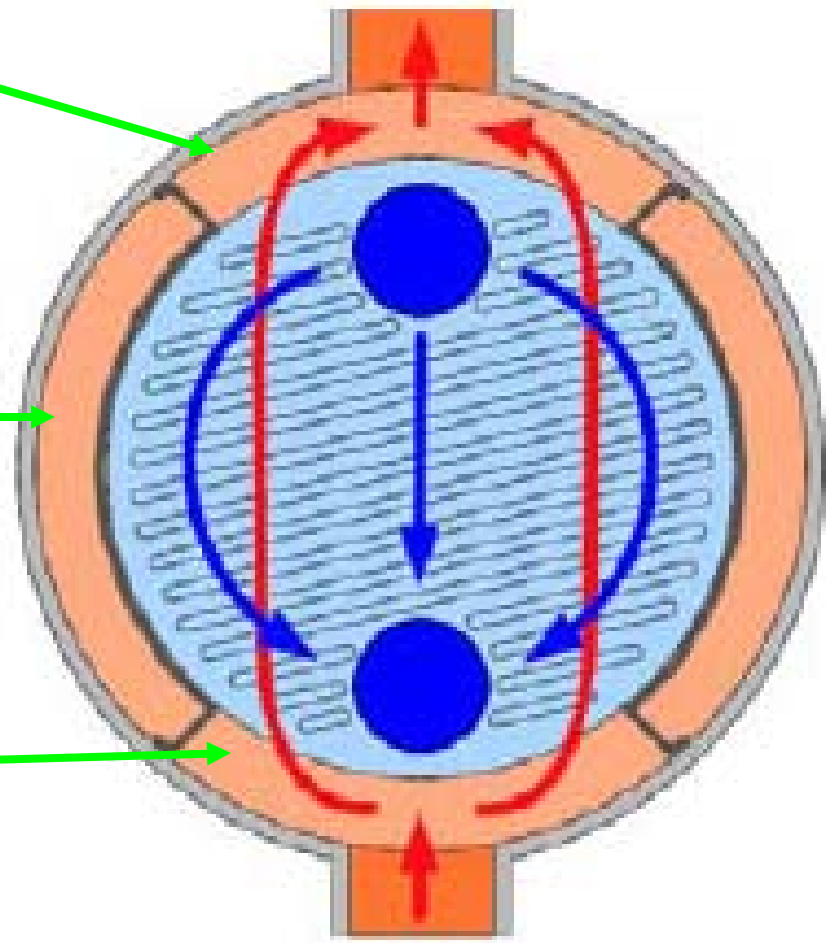
Throat of Plate

* Fluid leaves through the same area

Fluid Diverter*

Throat of Plate

* Fluid is forced through this section on the shell side



Removable Core



Experience

Neustadt, Germany

- Titanium plates
- 2 preheaters
- 2 evaporators
- Integrated separator



Experience with Refrigerants



DX CO2 cascade with CO2 collector



Flooded evaporator with NH3 separator



Flooded R507 evaporator in parallel with separators...Renault

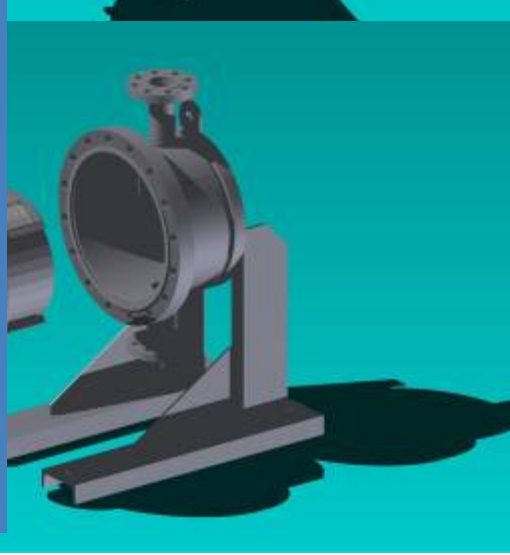
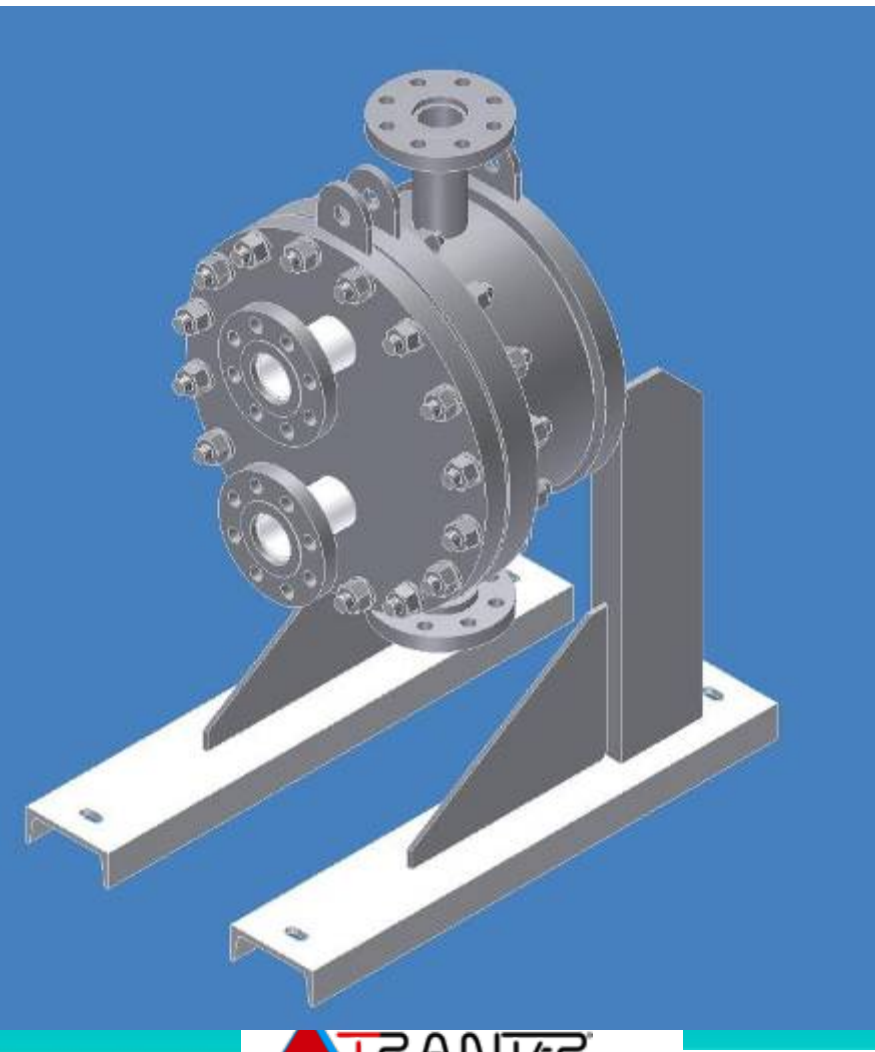
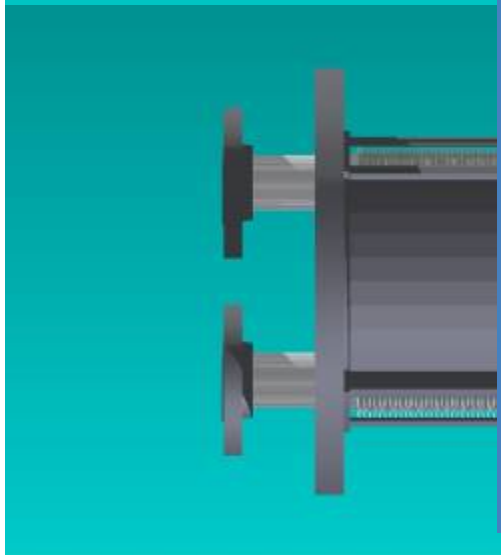
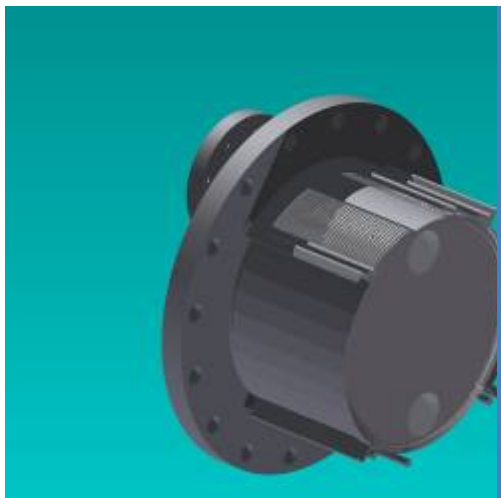


Low temp flooded evaporator for climatic test chamber in auto industry (BMW)



Condensers & Evaporators for Ice Rink in Switzerland

2010 Standard Quotations & Designs

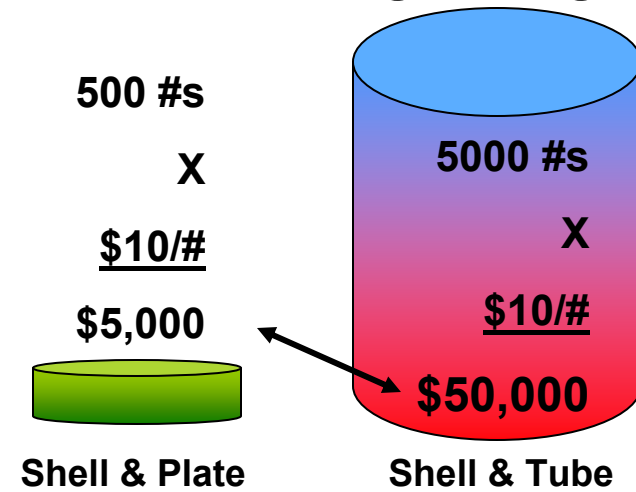


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Questions?