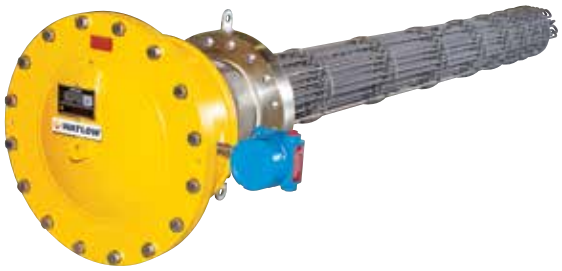
WATLOW

Ultra-Efficient Heat Exchanger

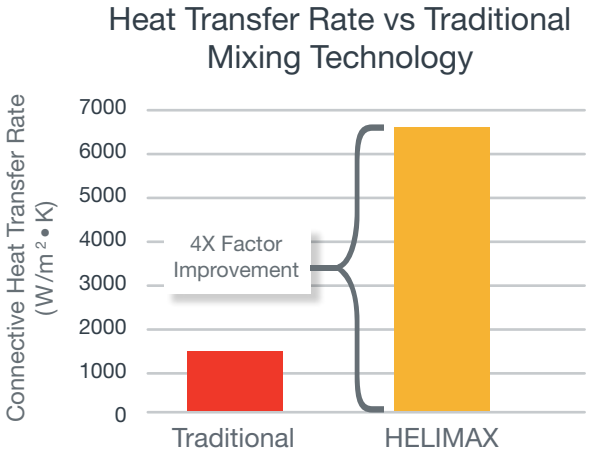
HELIMAX

Eliminate Heat Exchanger Fouling with Watlow's HELIMAX Technology



Fluctuations within the heat exchanger to either the operating temperature or the mass flow rate are common causes of **coking**, which can lead to system failures and expensive downtime. Some heat exchanger design methods, like segmental baffles, have **known dead zones** where hot spots can occur, accelerating the coking process.

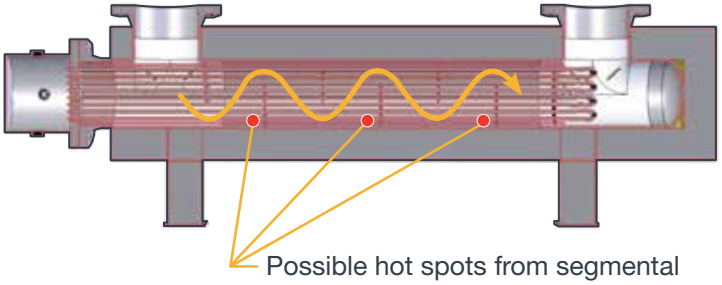
Watlow's **HELIMAX** ultra-efficient heat exchanger was designed to eliminate temperature-related failures. Leveraging our proven, patent-pending continuous helical flow technology generates **ultra-high heat transfer rates** with minimal fluid bypass and uniform sheath temperatures.



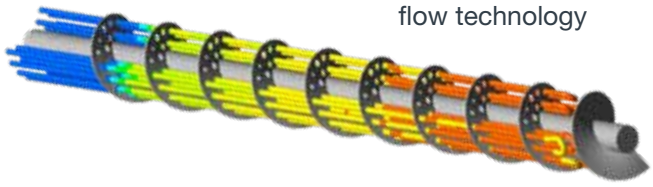
HELIMAX's significant heat transfer improvement delivers benefits including:

Continuous Helical Flow

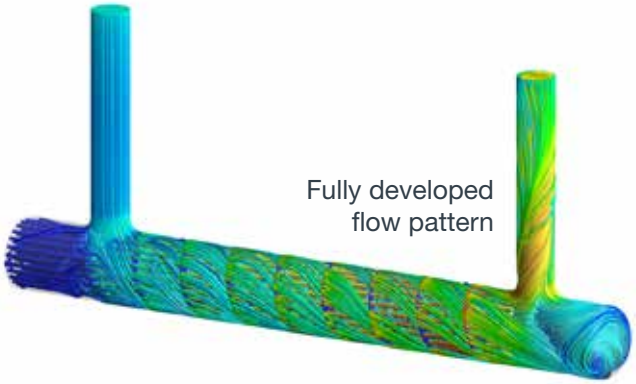
- Ultra-high heat transfer with 4X factor heat transfer improvement (compared to traditional parallel flow mixing technology)
- Lower sheath temperature rise (sheath "film" temperature)
- Lower shell temperature rise, particularly at low temperatures where convective heat transfer dominates
- Reduction in flow induced vibration



Possible hot spots from segmental baffles eliminated by HELIMAX



Continuous helical flow technology

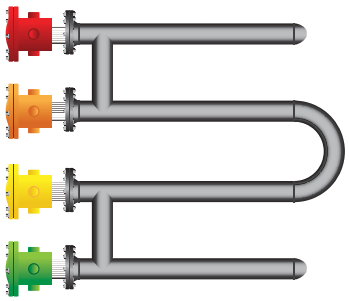


Fully developed flow pattern

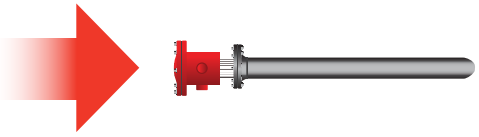
The dramatic improvement to heat transfer also allows for a major reduction in the physical size of the heat exchanger in terms of weight and length (or diameter) when compared to traditional, segmental baffle solutions.

Traditional Heat Exchanger

(4) 8" vessel with 24 heaters



New HELIMAX Heat Exchanger



(1) 6" vessel with 15 heaters

Powered by Possibility

WATLOW

Contact your Watlow representative for more information

www.watlow.com