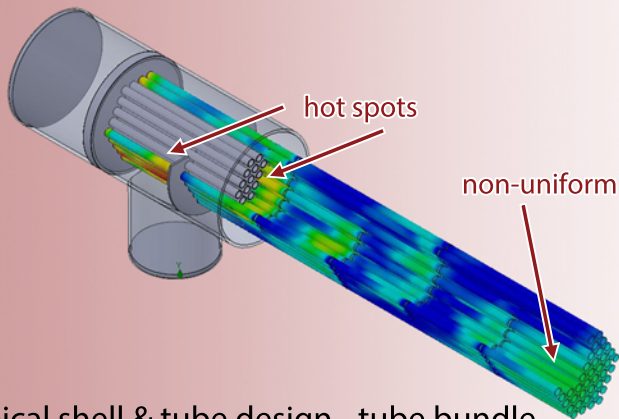


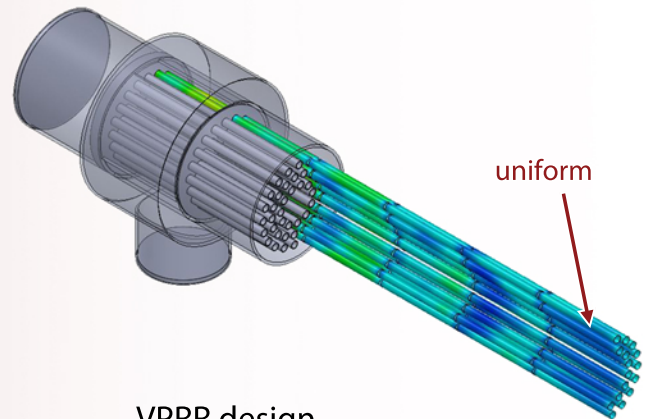
# AirBTU.VPRR

## Prioritizing engineering over materials

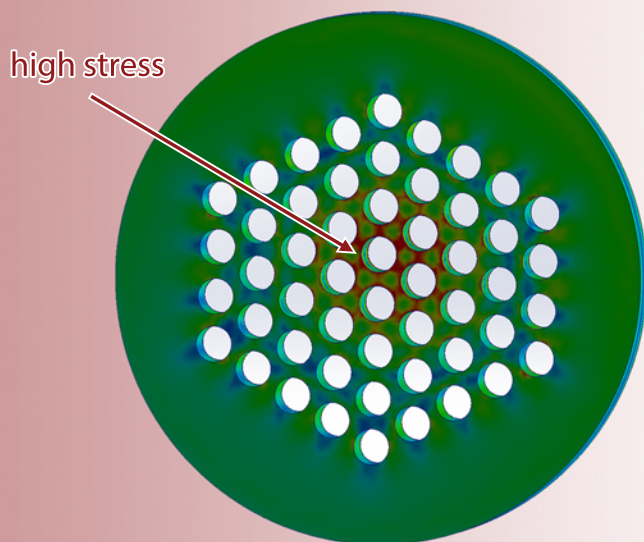
Material upgrades alone can't resolve thermal stress failures or hotspots common in high-temperature heat exchanger designs—**CFD-driven engineering is essential**. Our proprietary tube and baffle configuration, developed through advanced CFD analysis, ensures uniform temperatures, eliminates stress risers, and reduces total lifecycle cost.



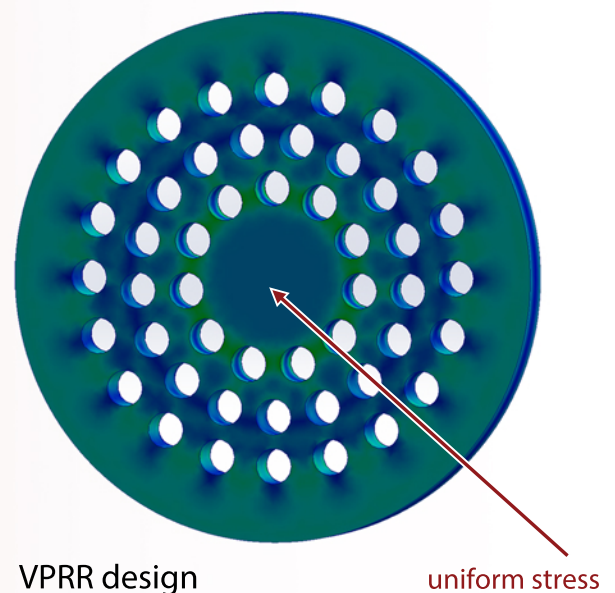
Typical shell & tube design - tube bundle



VPRR design



Typical shell & tube design - tubesheet



VPRR design

**Uniformity = Stress reduction**

**Minimize metal temperatures to reduce material costs**



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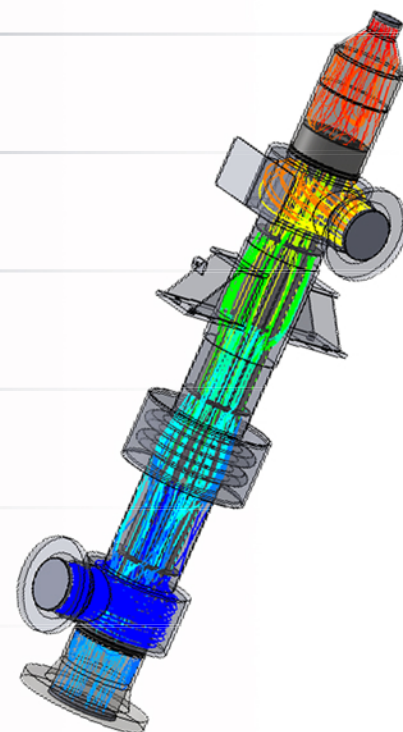


Twinsburg, Ohio, USA

# AirBTU.VPRR

## Prioritizing engineering over materials

Material	ASME (BPVC II) Maximum Allowable Temperature (°F)
Steel (SA-106, SA-179, SA-516, etc)	900
304L Stainless (SA-312, SA-213, SA-240, etc)	800
304 Stainless (SA-312, SA-213, SA-240, etc)	1200
304H Stainless (SA-312, SA-213, SA-240, etc)	1500
310 Stainless (SA-312, SA-213, SA-240, etc)	1500
310H Stainless (SA-312, SA-213, SA-240, etc)	1500
321 Stainless (SA-312, SA-213, SA-240, etc)	1500
Inconel 625 (SA-444, SB-829, SB-168, etc)	1600
Nicrofer 6025 (SB-517, SB-163, SB-168, etc)	1800



**Note:** Maximum allowable temperatures do not account for strength degradation at temperature. Material selection should be based on individual applications.

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