

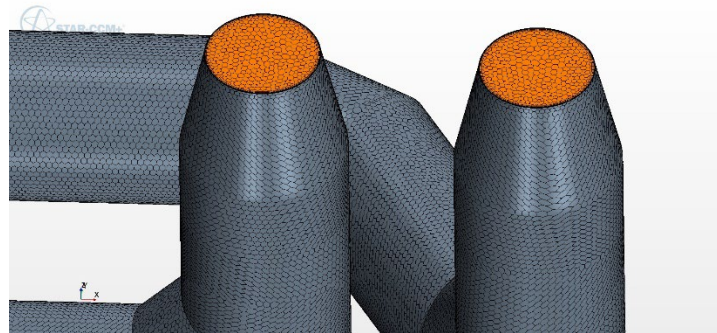
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Sludge Furnace – Flow Distribution Study (Computational Fluid Dynamics)

Project Description: A new sludge furnace piping design is evaluated for flow to four distribution points. Star CCM+ is used to model the process flow, where the flow is visually evaluated for large eddies, rotational flow, and potential impingement locations. Further, the flow rates are determined and evaluated for even flow distribution.

CFD Model: Polyhedral meshing is used with prism layer generation. The below image shows meshing of two of the distribution points into the CFD model.



CFD Results: Streamline plots are generated, with the below images showing one of these plots.

