BETE®

Custom Solutions Bulletin

Industry: Waste Management

Application: Gas Scrubbing

Product Descriptions: SA Lance with Quick-disconnects

Technical Questions?

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Situation: A BETE customer has an incineration facility in which they need to treat the combustion gasses. Wet limestone slurry must be injected into a gas stream operating above 1500°F (815°C) containing chlorine and fluorine gasses. Operational history indicates they need to remove this nozzle on a regular basis for maintenance. As a result, they requested connection points that can be made up and broken faster than conventional flanges. Code compliance was not required in this instance. As the geometry of the system was fixed, the nozzle needed to meet specific dimensional requirements.

BETE's solution: Working from a standard SA lance design, BETE designers engineered a wedge-lock system to fasten the mounting flange in place. This wedge system allows the lance to be disconnected from the injection port by removing two wedges with a slight tap. BETE Application Engineers performed research and then specified the air and fluid connections as commercial cam-lock fittings, which seal and release by the action of only two small levers. In order to place the head of the spray in the center of the vapor stream, the length of the entire assembly was increased to over 6′ (1.8 m) long. The lance was constructed of Inconel to withstand the exceptionally corrosive vapor stream.