

Industry: Chemical Processing

Application: Material Injection/Mixing

Product Descriptions: 1" SpiralAir 310-F-10

Situation: BETE Applications Engineers were contacted by a company designing mixers that would inject 1000 lb/h (453.6 kg/h) of 20% aqueous ammonia into a hot gas stream. The nozzle assembly would need to be constructed of materials that could stand up to a harsh chemical environment. The end user had compressed air available that they were willing to use in order to produce the smallest dropsize possible.

BETE's solution: The 1" SA310 nozzle, part of the SpiralAir™ series, was specified to inject the aqueous ammonia. This two-fluid nozzle design features the unmatched atomization ability of the original BETE spiral, enhanced with the use of atomizing (compressed) air. The gas would be flowing through 18" pipe. The spray needed to be co-current and centered in the pipe. The right angle lance assembly (F), one of many customizable lance designs offered, was chosen to accommodate the required spray orientation. The mixer design included a 4" pipe inlet, as the tip of Lance Assembly F conveniently fits through 4" Sch 40 pipe. Standard SpiralAir™ materials, 316 SS with Cobalt Alloy 6 wear components, were used. The Lance Assembly F also features Nickel Alloy C gaskets that provide greater temperature resistance than elastomer materials.

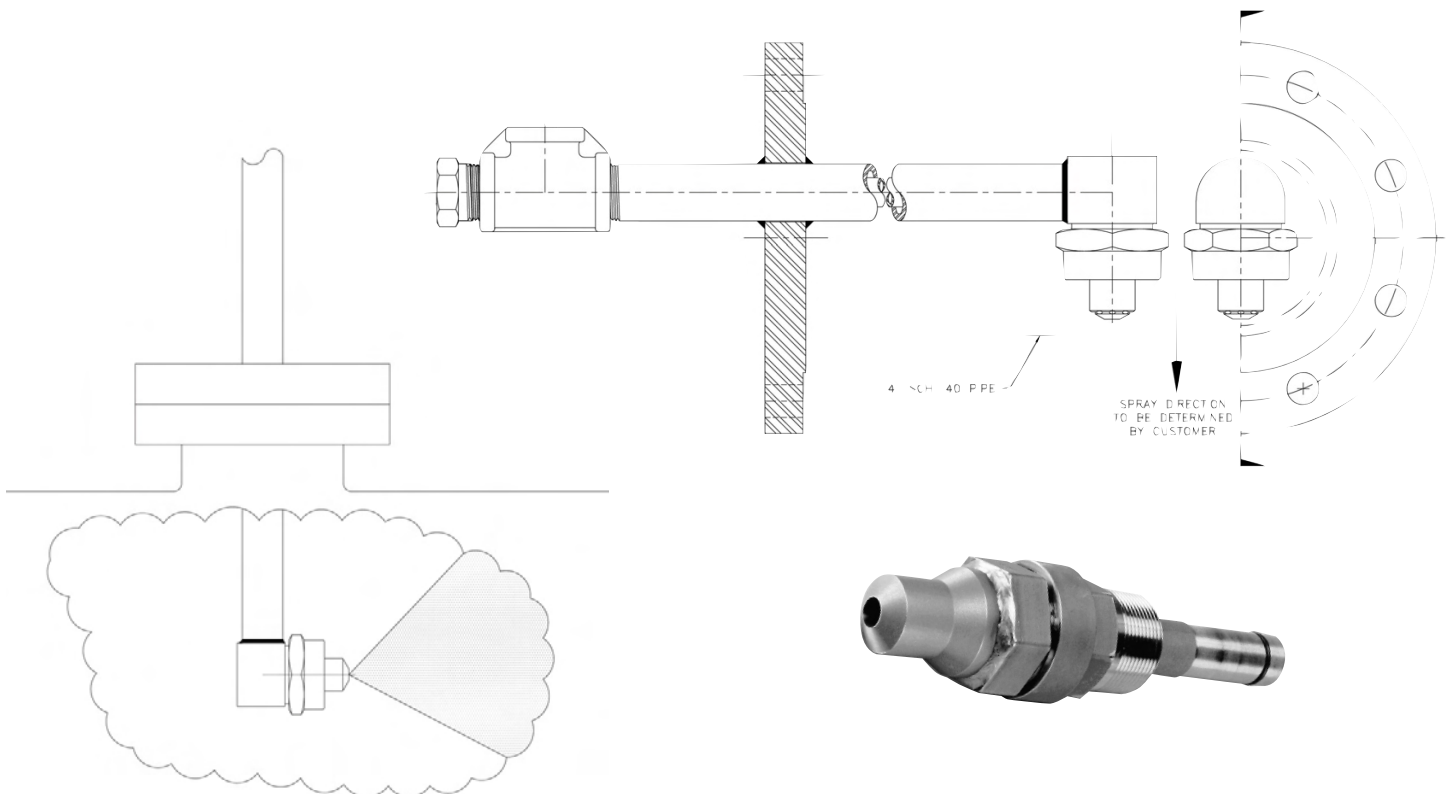
Technical Questions?

Please contact:

Applications Engineering
(appeng@bete.com)

413-772-0846

App#071702



App#071702