

Custom Solutions Bulletin

Industry: Petroleum

Application: Material Injection

Product Description: Cobalt Alloy 6 MaxiPass with 316 SS adapter

Situation: A customer requested a quote for an oil injection spray nozzle for use in a catalytic reformer unit in an oil refinery. The customer had a stainless steel lance designed already, and needed a spray nozzle to create the pattern. Because of the service, they requested the nozzle with a butt weld prep, to Technical Questions? Please contact: Applications Engineering (appeng@bete.com) 413-772-0846 App#070470

allow them to permanently secure the nozzle to the lance. Finally, since the environment contained highly abrasive particles, they requested an abrasion resistant alloy.

BETE's solution: Since the customer gave the liquid density, flowrate and available pressure, BETE Applications Engineers were able to select a MaxiPass 937N nozzle. The 60° angle was chosen because 60° angles are commonly used for this service. To meet challenge of the abrasive environment, Cobalt Alloy 6 was selected. This material is very difficult to weld under controlled conditions and impossible to weld in the field (BETE is one of the few companies in the world experienced in welding this material). To allow the end user to easily weld the nozzle in place, the nozzle was offered with a transition piece to 316 stainless steel. This transition piece also matched the 2" nozzle to their 3" piping.

