

Industry: Construction

Application: High Pressure Shaft Wall Wash Ring

Product Descriptions: Special 2" Nozzle Tube Assembly

Situation: A BETE customer had a special application that required the scrubbing of a submerged shaft with high impact spray that would remove algal deposits from the walls. The customer made provisions for 2500 PSI (172 bar) of supply pressure to provide an adequate pressure drop to overcome the hydrostatics of the varying depths at which the assembly would have to spray.

Technical Questions?

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BETE's solution: The flat fan spray pattern provided by the BETE NF series nozzles produces a half angle spray pattern when submerged, unlike many other nozzles which collapse into a straight jet due to the influences of the surrounding fluids. The arrangement of many NF nozzle tips along a 9' 6" (2.9m) diameter loop provides a highly focused plane of spray against the walls of the shaft. The scrubbing of the complete length of the shaft is achieved by slowly passing the assembly through the length of the shaft. The sixty nozzle tips used were sized to provide 2-3 gallons (7.6-11.4 Liters) per minute each for a total of 140 gallons (530 Liters) per minute across the surface of the shaft. The 120° angle was chosen to provide complete coverage and the spacing of nozzles was chosen to provide approximately 10% overlapping coverage.

