
Question 37: What are your typical design criteria for injection quills (i.e. slotted vs. nozzle, direction, spray pattern, filter mesh, metallurgy, etc.)?

Dennis Haynes (NALCO Champion)

NACE has a Technical Committee Report 24215 that addresses Refinery Injection and Process Mix Points that is a good reference for this discussion. The answer is complicated due to potential quill uses; such as for wash water, corrosion inhibitors, antifoulants, or other additive applications. Each will have a certain requirement. The parameters listed in the question, such as spray pattern, metallurgy, etc. are very important and should be reviewed case-by-case. Another point to consider is to use a flanged quill instead of a quill through a packing gland in cases of elevated pressure.

Richard K. Hoehn (UOP)

Normally a slotted quill facing in the direction of flow for most services. For naphtha units and in other special situations, a spray distributor, also oriented in the direction of flow, to get better water dispersion. The spray nozzle specified is a Bete type TL with a 60° full cone spray pattern. When a spray nozzle is used, a filter is placed in the water line to prevent clogging of the spray nozzle

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