

MINOX ASME BPE Products



MINOX ASME BPE range of fittings is manufactured under strict quality control method. All tubes and fittings are individually well capped and bagged after cleaned internally. For tracibility purpose, all MINOX ASME BPE products are delivered with Mill Test Report or 3.1. certificate (EN 10204), after permanently marked with brand name, heat number, material and internal surface (Part SF). The materials, dimensions and tolerances, surface finish and seal are all compliance with ASME Bioprocessing Equipment Standard for quality assurance.

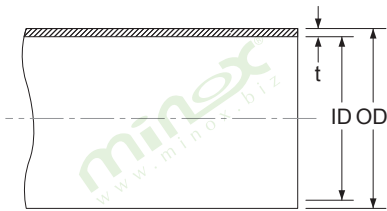
Table SF-3 Acceptance Criteria for Product Contact Surface Finishes of Fittings

Anomaly or Indication	Acceptance Criteria
Cluster of pits	No more than 4 pits per each 0.5 in. x 0.5 in. inspection window. The cumulative total of all relevant pits shall not exceed 0.040 in.
Demarcation	If <5% of the total area when visually inspected and Ra max. is met.
Dents	None accepted.
Grit lines	If Ra max. is met.
Welds	If polished smooth, blended, and Ra max. is met.
Nicks	None accepted.
Pits	If diameter <0.020 in. and bottom is shiny. Pits <0.003 in. diameter are irrelevant and acceptable.
Scratches	If length <0.25 in., depth <0.003 in., and Ra max. is met.
Star burst	None accepted.
Surface cracks	None accepted.
Surface inclusions	If Ra max. is met and there is no liquid penetrant indication.
Surface residuals	None accepted, visual inspection
Surface roughness (Ra)	See Table SF-4.
Weld slag	None accepted.
Weld porosity	None accepted.



ASME BPE Tubings

BPE Code	Surface Finish Roughness Average (Ra)
SFF0	Unpolished ID and OD, not third-party inspected
SFF1	20 $\mu\text{in.}$ (0.51 μm) max polished ID, unpolished OD
SFF1	20 $\mu\text{in.}$ (0.51 μm) max polished ID, 32 $\mu\text{in.}$ (0.81 μm) max polished OD
SFF4	15 $\mu\text{in.}$ (0.38 μm) max electropolished ID, unpolished OD
SFF4	15 $\mu\text{in.}$ (0.38 μm) max electropolished ID, 32 $\mu\text{in.}$ (0.81 μm) max polished OD



DT1 - BPE Tube Dimension (mm)			
Size (Inch)	OD	ID	t
0.25"	6.35	4.57	0.89
0.375"	9.53	7.75	0.89
0.50"	12.70	9.40	1.65
0.75"	19.05	15.75	1.65
1.0"	25.40	22.10	1.65
1.5"	38.10	34.80	1.65
2.0"	50.80	47.50	1.65
2.5"	63.50	60.20	1.65
3.0"	76.20	72.90	1.65
4.0"	101.60	97.38	2.11
6.0"	152.40	146.86	2.77