MGNewell
We Make It Work Better.



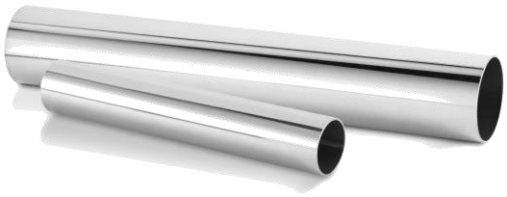

What is the Difference between ASME BPE Tubing and Standard Sanitary Tubing?

Through our fabrication and installation, we provide a lot of **sanitary stainless steel tubing** to the food, beverage, personal care and biopharmaceutical markets. Each piece of tubing can specified by its sanitary surface finish, tolerance and dimensions. But, have you ever wondered - 'What is the difference between standard 316L stainless steel sanitary polished tubing and 316L ASME BPE marked tubing?'

Overview

There was a time when what was considered standard "dairy" type tube and tubing used in the biopharmaceutical industry were very different. Diary tube had a 32RA ID surface finish. Pharmaceutical tubing usually had much better surface finishes, somewhere between 25Ra and 10Ra. Tubing with these better surface finishes was usually bought at a significantly higher price than the 32Ra tube.

Since their initial release in 1997, the **ASME BPE** standards have become the standard in the biopharmaceutical industry. The standard designates 6 different acceptable surface finishes, the most common SF1 (maximum 20 Ra) and SF4 (maximum 15Ra+ electropolish). It also designates other acceptance criteria for surface finishes.



Meanwhile, tubing manufacturers continued to refine their manufacturing processes. A 20Ra ID surface finish used to be a multi-step, laborious process, now it has become primarily automated. The end result is that the standard polished "dairy" tube comes with a 20Ra ID finish. No one offers 32Ra tube anymore.

From a metallurgical standpoint, standard 316L and ASME BPE tubing are identical. They are also dimensionally the same.

So what's the Difference?

If SF1 ASME BPE tubing and standard 316L sanitary tubing both come with a 20Ra ID polish, why should I pay the premium to buy the BPE tubing? In a word, insurance. As mentioned above, the ASME BPE standards have additional acceptance criteria for surfaces finishes beyond simple Ra readings. They have an extensive list that addresses issues such as pits, nicks, inclusions and cracks. To ensure that the material meets these standards, each piece of BPE tubing is visually inspected by boroscope. Does this mean that the dairy tubing is full of pits and cracks? Absolutely not. But if you want to be absolutely sure that it does not, the ASME BPE tubing gives you that.

Greensboro Division
Phone: 336.393.0100 / 800.334.0231
Fax: 336.393.0140

Louisville Division
Phone: 502.459.7475 / 800.459.7475
Fax: 502.459.7633

Nashville Division
Phone: 615.822.3030 / 855.749.4820
Fax: 615.822.3031

www.mgnewell.com

sales@mgnewell.com

www.newellautomation.com