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Special Interest Articles:

Sheet Gasket Thickness

In the March Newsletter, we discussed the M & Y Values of gaskets and why they are important. This month I would like to discuss gasket thickness.

As a rule, thinner gaskets are recommended wherever possible. However, there are some situations where thicker gaskets are needed and recommended.

Thicker gaskets are usually used in low pressure, large diameter flanges. Flanges of this nature are usually not fabricated with a lot of bolting and there is no high internal pressure; therefore, the design does not need a great deal of bolting. Limited bolting means there will be limited (low) compression and thin flanges means they will distort when bolted, creating little or no compression in the spaces between bolts.

Although thinner gaskets are recommended wherever possible, it is not always possible to use thin gaskets. Thicker gaskets will conform better to badly damaged or warped flanges. This is because a gasket's ability to fill in flange irregularities is based on the amount the gasket compresses at a given load. Since compressibility at a particular load is expressed as a percentage of the gasket's original thickness, a thicker gasket with a larger original thickness will actually compress a larger distance, allowing thicker gaskets to fill-in deep scratches or low spots.

While the thicker gasket will seal more flange irregularities, it can lead to more problems down the road. The higher creep relaxation will mean the end-user may need to re-torque the fasteners to maintain adequate compressive load on the gasket over the life of the joint. This situation is compounded by the increased surface area of the gasket exposed to the internal pressure, which actually creates higher total forces trying to "push" the gasket out of the joint. Thicker gaskets appear as "taller" surfaces to the pressure, which means a larger surface area. Pounds per square inch multiplied by greater square inches yield greater pounds of force required.

In conclusion, flanges which require use of thicker gaskets create problems over which a gasket manufacturer has no control The best solution is to use or design flanges with higher compressive loads available, keep the finish in good condition, and use 1/16" or even 1/32" thick gaskets.

If you are replacing a gasket type on an ASME vessel, remember, the vessel was originally designed using specific gasket M & Y values and thicknesses.

If you are in doubt, I suggest contacting a gasket manufacturer, such as Garlock (www.garlock.com). I would also check with the original equipment manufacturer.

If you are interested in obtaining more information about Trumbo, or if you are looking for a quote, just click here.

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The employees of Trumbo want to wish you and your family a Merry Christmas and a safe holiday season.

NON FERROUS SURCHARGE CHART

Prices for Stainless are up (↓) for December deliveries. Nickel Prices have increased by 20-30% for December. Remember, this chart is for surcharge only, it does not include the base price for materials.

Alloy	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2205	0.7523	0.7574	0.7215	0.5632	0.5622	0.6308	0.7588	0.7249	0.7519
304 CLAD	0.3534	0.3347	0.3205	0.2666	0.2726	0.3	0.3594	0.3303	0.3511
304/304L	0.6016	0.5687	0.5403	0.4325	0.4446	0.4948	0.6136	0.5731	0.6191
304H	0.6016	0.5687	0.5403	0.4325	0.4446	0.4948	0.6136	0.5731	0.6191
304LN	0.6016	0.5687	0.5403	0.4325	0.4446	0.4948	0.6136	0.5731	0.6191
304N	0.6016	0.5687	0.5403	0.4325	0.4446	0.4948	0.6136	0.5731	0.6191
309/309S/309H	0.7841	0.7366	0.694	0.5587	0.5767	0.6502	0.8111	0.7581	0.829
310/310S	1.0369	0.964	0.8965	0.7395	0.7681	0.8823	1.0993	1.0237	1.138
316/316L	0.7608	0.739	0.6921	0.5689	0.5777	0.6627	0.7982	0.7485	0.8054
316LN	0.7608	0.739	0.6921	0.5689	0.5777	0.6627	0.7982	0.7982	0.8054
316Ti	0.7833	0.7597	0.7109	0.5844	0.594	0.6819	0.8226	0.7714	0.8313
317/317L	0.8799	0.8639	0.8075	0.661	0.6683	0.7703	0.9246	0.8707	0.9333
AL-6XN Plus	1.4162	1.3372	1.4477	1.449	1.3939	1.2735	1.0564	1.1345	1.4131
alloy 20	1.6467	1.4871	1.6107	1.5444	1.4468	1.3372	1.1699	1.2744	1.5584
AL-200 TM	3.1192	2.5648	2.907	2.6976	2.3947	2.1176	1.9971	2.294	3.0329
Al-400 TM	2.3123	1.9708	2.2196	2.0685	1.8568	1.6642	1.6041	1.8355	2.3819
Al-600 Tm	2.6038	2.2021	2.4507	2.2789	2.0593	1.8577	1.6881	1.904	2.4417
Altemp 625 In	4.344	4.0843	4.3166	4.2492	4.1002	3.8758	3.5821	3.7601	4.3039
Alloy 276	3.5832	3.3826	3.6396	3.6576	0.7519	3.261	2.9147	3.0924	3.7369

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