Steel Options for Vacuum

18-8 stainless steels are a group of stainless steels that typically have 18% Chromium, 8% Nickel and most of the balance Iron. They are usually austenitic (non magnetic). They have been found to be very useful in vacuum technology because of their low outgassing rates. The mostly widely used 18-8 stainless steel used in vacuum technology is 304 followed by 316. If the stainless steel type is followed by a "L" (304L), that means that stainless steel is lower in Carbon than that version of stainless without the L. Lower carbon improves corrosion resistance. If the stainless steel type is followed by "LN" (316LN), that means it is lower in Carbon and higher in Nitrogen. The higher nitrogen allows the stainless steel to be more austenitic (less magnetic) than the stainless steel with less nitrogen.