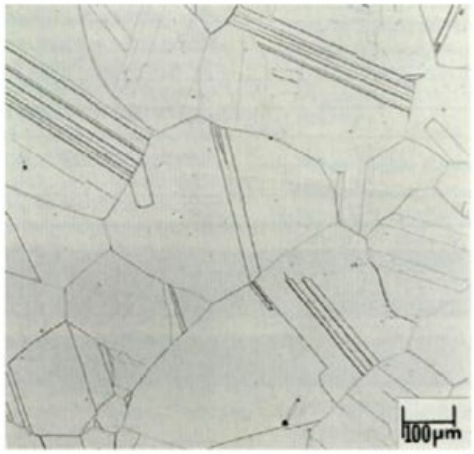
HAYNES® HR-160® alloy

Physical Metallurgy

-	Typical Grain Size	Average Hardness
Plate	3 - 4½	89
Bar	2 - 3	85
Sheet	3½ - 4½	88



Annealed Microstructure

The alloy has a stable austenitic structure and exhibits no sigma or mu phases after long-term aging. Aging at 1200, 1400 and 1600°F (649, 760 and 871°C) for 4000 hours, for example, resulted in the precipitation of $Cr_{23}C_6$ and G phase ($Ni_{16}Ti_6Si_7$). The morphology of G phase is quite similar to that of $Cr_{23}C_6$. Thus, G phase is not considered to be more detrimental than carbides in causing the ductility to drop upon long-term aging. The alloy is non-magnetic in annealed and cold-worked conditions.