

HAYNES[®] R-41 alloy

Heat Treatment

Wrought HAYNES[®] R-41 alloy is furnished in the solution annealed condition unless otherwise specified. After component fabrication, the alloy would normally again be solution annealed at 1950°F - 2150°F (1066°C - 1177°C) for a time commensurate with section thickness and rapidly cooled or water-quenched for optimal properties. Following solution annealing, the alloy is given an age-hardening treatment to optimize the microstructure and induce age-hardening. A variety of age hardening practices are used commercially, all of which include heat treating in the range of 1400°F - 1800°F (760°C - 982°C). For example, AMS 5545 specifies age hardening samples at 1400°F (760°C) for a minimum of 16 hours and air cooling.