

# HAYNES<sup>®</sup> HR-120<sup>®</sup> alloy

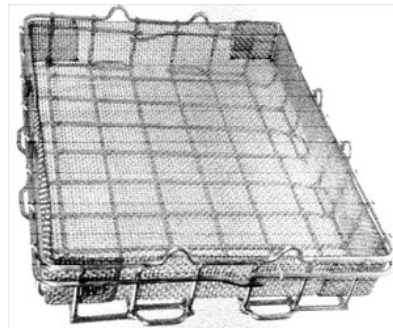
## Principal Features

HAYNES<sup>®</sup> HR-120<sup>®</sup> alloy (UNS N08120) alloy is a solid-solution-strengthened heat-resistant alloy that provides excellent strength at elevated temperature combined with very good resistance to carburizing and sulfidizing environments. Its oxidation resistance is comparable to other widely used Fe-Ni-Cr materials, such as alloys 330 and 800H, but its strength at temperatures up to 2000°F (1095°C) is significantly higher, even in comparison to Ni-Cr alloys. The alloy can be readily formed hot or cold, and is commonly welded using HAYNES<sup>®</sup> 556<sup>®</sup> filler wire.

## Applications

Applications include those which require high strength combined with good resistance to carburizing and sulfidizing environments such as the following:

- Bar Frame Heat Treating Baskets
- Wire Mesh Furnace Belts and Basket Liners
- Muffles, Retorts
- Heat Treating Fixtures
- Waste Incinerators
- Radiant Tubes
- Cast Link Belt Pins
- Recuperators
- Fluidized Bed Components



*HR-120<sup>®</sup> alloy heat treat furnace basket and mesh liner. This 3/8 inch diameter rod frame basket has replaced 1/2 inch diameter baskets in similar design in 330 and 600 alloys. This reduction in rod diameter is equivalent to a 43% weight reduction.*

## Heat Treatment

HAYNES<sup>®</sup> HR-120<sup>®</sup> alloy is furnished in the solution annealed condition, unless otherwise specified. Depending on the product form, the alloy is solution annealed at a temperature ranging from 2150 to 2250 °F (1175 to 1230 °C) and rapidly cooled. For more information on heat-treatment, please [click here](#).

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