

Platinum DPH

Pt DPH

Platinum DPH is an oxide dispersion hardened grade of pure platinum.

It is commonly used in high temperature applications when the use of Rhodium cannot be tolerated or in times of high Rhodium prices (e. g. crucibles and equipment for processing special optical glasses). It is also used as a lining for refractory components or in thermocouple sheaths for the use in glass melts.

The hardening which results from the oxide particles, represents the most effective strengthening mechanism of the material. Due to the modified microstructure, DPH is considerably less sensitive to corrosion processes along the grain boundaries than comparable materials. These characteristics allow for extended life and results in the precious metal to be used more economically. An example would be reduced wall thicknesses of Pt DPH compared to Pt.

General information

Applications	crucibles, electrodes, casting dishes, semi-finished products, glass manufacturing, crystal growth crucibles, thermocouple thimbles
Product Forms	wire, sheet, tube
Density, g/cm ³	21.45
Melting Point, °C	1769

Forming Processes

Material Behaviour	ductile
Forming Process	machinable, formable

Mechanical Properties

Hardness, HV	60
Tensile Strength, MPa	178
Yield Strength, MPa	73
Elongation, %	22

Contact

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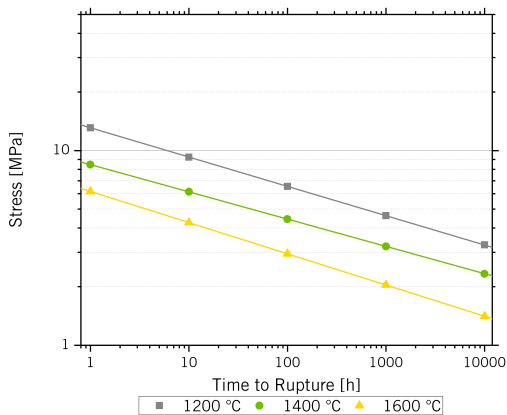
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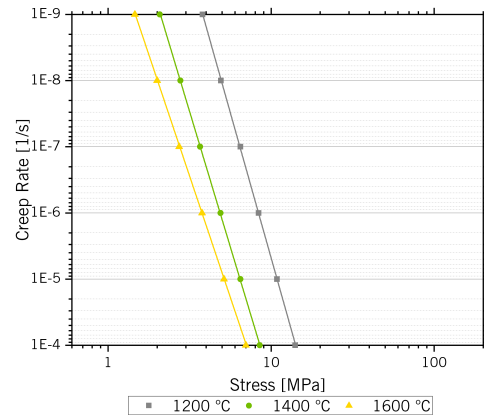
Pt DPH

Creep Rupture



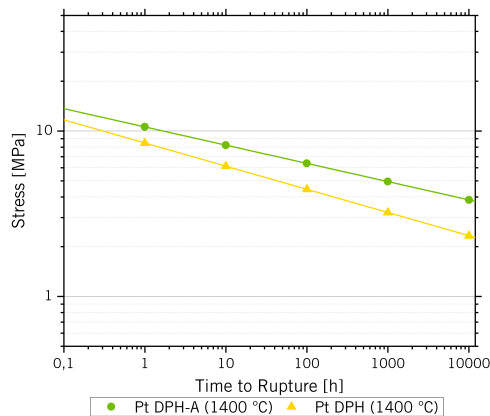
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Norton



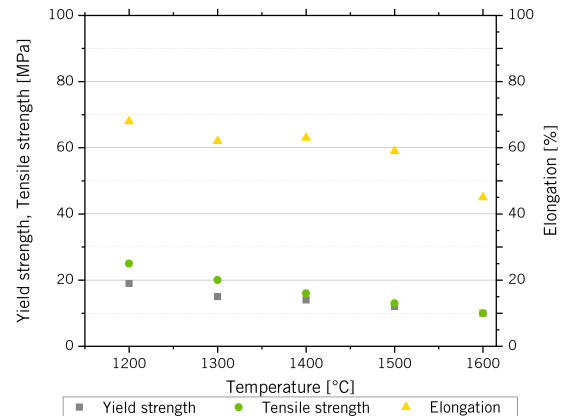
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Creep Rupture – Comparison



source: measured and extrapolated

High Temperature Tensile Test



source: measured

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