CENDRES+ MÉTAUX

Material Data Sheet

(213) - PtIr10%

1. Composition

Pt	90.00%
Ir	10.00%

2. Physical Properties

Melting range	1770-1800°C
Density	21.6 g/cm³
Colour	silverwhite
Young's Modulus	160 GPa

3. Mechanical Properties

Condition	cold worked	soft	hardened
Parameters	50%-75%	1200°C/60'/H2O	-
Hardness HV5	>180	100	
Tensile strength (Rm)	>450 MPa	335 MPa	
0.2% Proof stress (Rp 0.2%)	>330 MPa	210 MPa	
Elongation	>9 %	30 %	

4. Handling

Brazing -

Pickling -

Remarks

Application/indications:
PtIr10% is a highly corrosion resistant, biocompatible alloy with relatively high mechanical strength. Therefore It is particularly suitable for use in the medical field.

Processing:
Very well suited for all cold work processes (rolling, drawing, stamping, punching, bending, chasing).

Machining such as turning, milling, drilling etc. is preferably done on cold worked or hardened material.

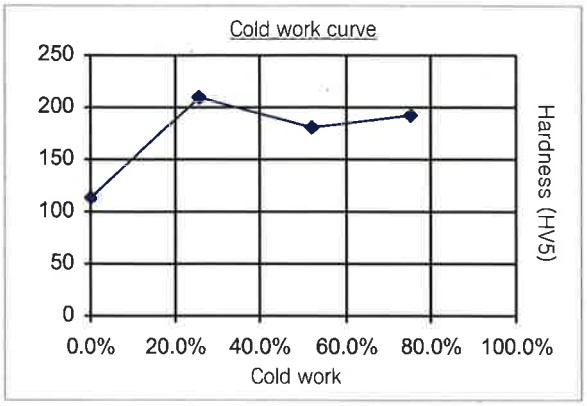
Thermal treatments:
PtIr phase diagram actually shows a miscibility gap between Pt and Ir at temperatures below 970°C. At 90% Pt a single-phase structure should be expected above 720°C. In fact, the diffusion in this alloy must be very small, because even with temperatures well above 720 ° C, single-phase structures are hard to generate.

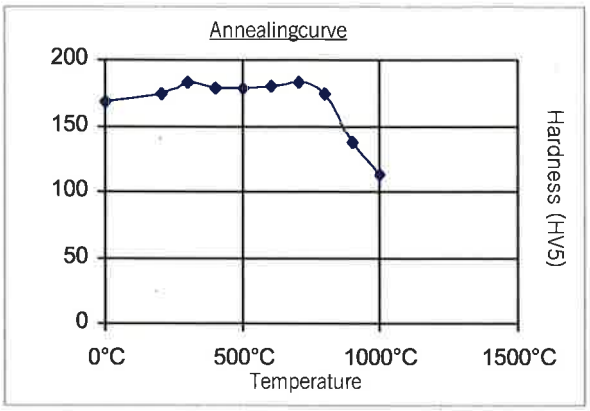
Hardening could not be detected even with long annealing times between 600 and 700°C.

5. Certification

Manufacture and delivery are constantly monitored according to the quality management system standard according to ISO 9001.

6. Graphs





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