Wire
Welding alloys

IMPHY 286 is a precipitation hardenable stainless steel which shows:

- Very high strength properties and creep resistance at temperature to about 700°C after aging treatment due to Ti additions.
- Especial resistance to pitting and crevice corrosion.
- Excellent fatigue strength and stress-corrosion cracking resistance to chloride ions.
- Outstanding resistance to intergranular corrosion due to sensitization.
- Good resistance to oxidation and scaling at high temperature.

Typical analysis

	C	Ni	Cr	Mo	Mn	Ti	Al	V	B	Fe
Mini		24	13.5	1	1.25	1.9		0.1	0.003	Bal
Maxi	0.08	27	16	1.5	2	2.35	0.35	0.5	0.01	

Specifications

UNS S66286 – WNr 1.4980 – ASTM A453 – AMS 5731

Mechanical properties

Conditions	Tensile strength (MPa)	Yield strength (MPa)	Elongation %
Annealed 980° C	≈ 620 MPa	≈ 250 MPa	> 30%
Annealed 980° C + Aged 720° C – 16h	≈ 1070 MPa	≈ 700 MPa	> 30%

Creep (per ASTM A453)	
Load 385 MPa	**Temp. 649° C**
Time ≈ 300 h	Elong. > 20 %

Creep (per AMS 5731)	
Load 483 MPa	**Temp. 649° C**
Time ≈ 100 h	Elong. > 15 %

Typical applications

IMPHY 286 is recommended for any application at high temperature when a high mechanical behaviour is required as fasteners or springs in automotive industry.

The data enclosed in this document are only given as indicative values and correspond to our standard product. Different specific requirements are subject to discussion and formal approval by Aperam Alloys Imphy. For further information or special request, please contact us.

©June 2019. IMPHY® is a registered trademark of Aperam Alloys Imphy

Aperam Alloys Imphy
B.P. 1
Avenue Jean Jaurès
F- 58160 Imphy

nickel.alloys@aperam.com
www.aperam.com

©June 2019