

Inconel 625

Material properties

- High mechanical strength and an higher ductility than stainless steel
- High corrosion resistance
- Excellent thermal and creep properties

Applications

- Aeronautic : turbines, exhausts
- Marine : shafts, engines, propellers
- Oil and chemical : wellhead
- Nuclear : command stem and reactor core

Physical properties (as built)

Density	8250	kg.m ⁻³
Young modulus	131000	MPa

Chemical composition

Elements	Ni	C	Si	Fe	Mn	P	S	Cr	Mo	Cu	Co	Ti	Al
%	<58	0,03-0,1	<0,5	<5	0,5	<0,02	<0,015	20-23	8-10	<0,5	<1	<0,05	0,4

Mechanical properties

Properties	Notation	Direction	As built	units
Yield strength	Rp _{0,2}	XY	677 ± 15	MPa
		Z	635 ± 15	
Tensile strength	R _m	XY	965 ± 20	MPa
		Z	900 ± 25	
Elongation at break	A%	XY	28,7 ± 3,9	%
		Z	35,9 ± 6,4	