

### Mechanical properties of materials selected:

Material	<sup>1)</sup> Operating temperature range [°C]	Magnetic permeability <sup>2)</sup> H at 200 [Oe]
304L	-250 +450	1.002-1.005
316L	-250 +450	1.002-1.005
AM350	-75 / 250 <sup>4)</sup> (+490)	10-13
AM350 gehärtet	-75 (+450)	50-120
Hastelloy C-276	-250 / +650 <sup>4)</sup> (+750)	1.0002
Inconel 718	-250 / +650 <sup>4)</sup> (+815)	1.0011
Titan Gr. 2	+20 / +250 <sup>3)</sup> (450)	1.00005 (H bei 20 Oe)

### Analysis [%] of materials used by Mewasa AG:

Material	Resistance to corrosions	Features and Applications
304L	Good resistance, except against hydrochlorics and halogen salts	Vacuum technology, cryogenics, machine construction
316L	Good for hydrochlorics and salt water	Vacuum technology, cryogenics, valves for high purity gas, medical application, vacuum-valves, feedthroughs
AM350	Not resistant against aggressive inorganic acids	Good tensile strength and proof stress, slightly magnetic, for compensators, feedthroughs, valves
AM350 gehärtet	Not resistant against aggressive inorganic acids	Good tensile strength and proof stress, aerospace applications
Hastelloy C-276	High resistance against acids, chlorides and oxydation	Because of the high resistance main application is chemistry
Inconel 718	Good resistance against high temperatures and acids	Because of high temperature resistance main applications are in aerospace, solar, and machine construction
Titan Gr. 2	Good resistance against salt water and chloride gas	Low weight, aerospace and medical applications

1) Applications that deviate from room temperature have an influence to the mechanical features of the bellows.

2) 1 [Oe] = 79.5775 [Am-1]

3) Under certain conditions

4) Under certain conditions

5) Analysis values in AISI