Rebarinox®

ACERINOX	ROLDAN
ACX 917	
DESIGNATION ASTM	A276

DESCRIPTION:

Grade ACX 917 is an austenite-ferrite stainless steel (duplex). Thanks to this structure it combines excellent corrosion resistance with really interesting mechanical properties. Its chemical composition includes Molybdenum which increases its corrosion resistance against pitting. This grade is the perfect solution for extreme environments where durability is a must.

CHEMICAL COMPOSITION:

ACX 917	C	Mn	P	S	Si	Cr	Ni	Mo	N
EN 1.4462	≤0.030	≤2.00	≤0.035	≤0.015	≤1.00	21.0 - 23.0	4.5 - 6.5	2.5 - 3.5	0.10 - 2.22
UNS S32205	≤0.030	≤2.00	≤0.030	≤0.020	≤1.00	22.0 - 23.0	4.5 - 6.5	3.0 - 3.5	0.14 - 0.20
ACX917 Standard	0.020	1.60	0.025	0.01	0.40	22.40	4.75	3.3	0.180

MECHANICAL PROPERTIES TABLE:

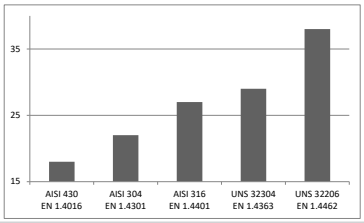
Roldan Stardard Property/ International Standars:

Ilustrative mechanical properties	**0.2 Yield Strength (MPa)**	**Tensile Strength (MPa)**	**Elongation (%)**	**Hardness (HB)**
Reinforcement (3 - 50 mm)	650	820	35	245
Wire rod (5,5 - 41,5 mm)	600	800	35	240
Bar (5- 52 mm)	660- 850	840 - 1040	15 - 35	240- 290
ASTM A-276	≥ 450	≥ 655	≥ 25	≤ 290
EN 10088-3	≥ 450	≥ 650	≥ 25	≤ 270
BS 6744	≥ 500	$R_{p0.2\%}$ ≥ 1.1	14	--

CORROSION RESISTANCE:

- Superior characteristics to AISI 316 grade.
- Corrosion resistance improved due to the increase content of Cr with respect to Austenitics grades.
- The N and Cr content improved crevice corrosion resistance as well as by pitting.

PRE (Pitting Resistance Equivalent)



PRE = (% Cr) + 3,3. (%Mo) + X. (%N)
Austenitics: X = 16
Duplex: X = 30

MECHANICAL PROPIERTIES:

- Yield strength and tensile strength are higher than AISI 304L / 316L and UNS 32304 grades
- Suitable for temperature ranges from -50^{0}C to 300^{0}C

Mechanical properties according to standard EN10088

EN	Grade (equivalent)	Re 0,2% min. N/mm² (Yield strength)	Rm min. N/mm² (Tensile strength)	A5 Mini.% (Elongation)
1.4301	304	190	500	45
1.4404/1.4571	316L	200	500	40
1.4362	2304	400	600	25
1.4462	2205	450	655	25

USES:

- Where AISI 316L grade does not reach the necessary corrosion resistance level.
- Under the sea.
- Pulp & Paper Industry.
- Tubing and storage in chemical products tanks.
- Mining.
- Structural.
- Desalination Plants.
- Oil drilling platform.
- Heat interchange.

WELDING:

- Good weldability (except oxy-fuel).
- Less sensitive to hot craking due to duplex structure.
- Recommendation EN 1.4462

STANDARDS:

XP A35-014	UNE 36067	BS 6744	ASTM A955	TC 104WI EC104031:2016