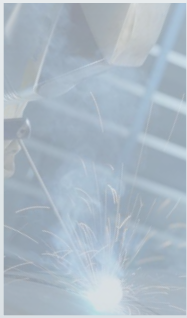




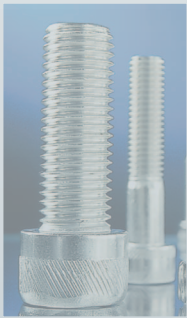
Thanks to a company history starting already 1873, Fagersta Stainless belongs to one of the world leading producers of stainless wire rod and wire. With customized chemistries the products fulfill everything from simple to high demanding applications.

Wire Rod

Welding



Cold Heading



Spring



High Temperature



Duplex



CHARACTERISTIC PROPERTIES FOR DUPLEX STEEL

Duplex steel is often characterized by:

- Good corrosion properties
- Good mechanical properties
- Good fatigue properties
- High resistance against abrasion
- Good welding properties

OUR DUPLEX STEEL GRADES

We offer a wide range of Duplex grades for many different applications i.e. cold heading, welding and bright wire for general applications. Our grades have tight chemistries and therefore equal properties from delivery to delivery.

EN. Nr	TYPE / AWS		FAGERSTA	C	Si	Mn	Cr	Ni	Mo	N	TS	CWH	Md30	PRE
				%	%	%	%	%	%	%	N/mm ²		Nohara	
1.4162		2101	R 617.10	0.030	0.70	5.00	21.50	1.50	0.30	0.220	730-830			28
1.4362		2304	R 630.10	0.015	0.45	0.95	22.50	4.70	0.25	0.110	680-780			26
1.4362		2304	R 630.21	0.015	0.45	0.95	22.50	4.70	0.25	0.110	680-780			26
1.4662		2209	R 646.21	0.013*	0.50	1.60	23.00	8.75	3.15	0.160	750-850			37
1.4462		2205	R 647.70	0.017	0.50	0.85	22.20	5.20	3.20	0.180	780-880			37
	312	29-9	R 656.70	0.100	0.40	1.85	30.35	9.20	0.34*	0.055	760-860			32

(Other grades from our standard range are displayed on the reverse side)

MECHANICAL PROPERTIES AND DEFORMATION HARDENING

Depending on what shape and wished tensile strength an end product shall have, the wire rod should have a specific ductility (formability) for the cold heading process and that it reaches a specific level of deformation hardening. Following methods of measurement are used regarding deformation hardening:

CWH-factor "Cold Work Hardening Factor", a matrix consisting of C, Cr and Ni contents. The factor varies between 80 – 150 and increases with increasing deformation hardening in the steel.

Md30 The temperature (°C) at which 30% true elongation (about 25% area reduction) makes 50% of the austenitic phase transform to deformation martensite. A higher temperature means higher deformation hardening in the steel.

CORROSION

PRE (= Pitting Resistance Equivalent = Cr + 3.1 x Mo + 25 x N) is a factor comparing properties of different chemistries with regards to pitting and crevice corrosion in corrosive environments. A higher value means better resistance. In the table above, PRE is shown for the grades we recommend for our Duplex grades.

SURFACES

Direct cooling (DK) ASTM 10-13
 "In line"-annealing (DST) ASTM 5-8
 Pit furnace (SG) ASTM 3-6

Our standard procedure is to supply the wire rod in pickled condition.

DIMENSIONS

5.0

18.0

Standard: 5 – 18 mm (.197" - .709") in increments of 0.5 mm (.020")
 (MOQ:s for some dimensions)

Tolerance: 5.0 – 10.0 +/-0.15
 >10.0 – 18.0 +/-0.20

Ovality: Max 60% of the total tolerance span.

Surface classes: Class 3 is the standard class which has a max defect depth of 0.10 mm for dimensions ≤ 10 mm and 1% of the diameter for dimensions > 10 mm. Welding rod has class 2 (max 0.20).

PACKAGING METHODS

Coil weight: Appr. 1000 kg

Outer diameter: Max 1250 mm

Inner diameter: Max 950 mm

