

## Special Alloyed Wireline for Service on Oil and Gas Wells

Special Alloyed (Scraping) Wire for Service on Oil and Gas Wells



Chemical Composition of Stainless Steel											
Wire brand	C	Si	Mn	P	S	Cr	Mo	Ni	N	Cu	Ti
<b>ECO 316</b>	0.019	0.35	1.83	0.031	0.026	16.94	2.08	10.05	0.077		
<b>Duplex 2205</b>	0.030	0.40	1.0 – 2.0	0.035	0.020	23.5 – 25.0	2.5 – 3.5	5.8 – 6.8	0.05 – 0.15	0.03	0.1
<b>Universal</b>	< 0.02	< 0.50	< 1.00	< 0.03	< 0.01	20 – 21	6.0 – 7.0	24.5 – 25.5	0.182	0.5 – 1.5	

Mechanical Composition of Stainless Steel			
Rope diameter (inch   mm)	Weight 1000 m (kg)	Tensile strength (N/mm <sup>2</sup> = MPa)	Minimum Breaking Load lbf   kN
0.072   1.83	20.76	1500 – 1700	960   4.26
0.082   2.08	26.90	1530 – 1780	1,200   5.33
0.092   2.34	33.95	1530 – 1750	1,550   6.89
0.108   2.74	46.65	1530 – 1750	2,120   9.43
0.125   3.18	62.50	1500 – 1750	2,750   12.23

Comparison of the Characteristics of Steel Brands in Different Corrosive Media			
Steel brand	Hydrogen sulfide, carbon dioxide	Chlorides, reservoir waters, salty solutions, etc.	Chloride, hydrogen sulfide, carbon dioxide
<b>ECO 316</b>	Acid resisting, it may be used in concentrations up to 30% CO <sub>2</sub> , without the presence of H <sub>2</sub> S	It may be used in concentrations up to 2 – 3%, provides resistance to pitting corrosion	It may be used in concentrations of H <sub>2</sub> S & CO <sub>2</sub> up to 30% provided that chlorides don't exceed 2 – 3%, without the presence of H <sub>2</sub> S
<b>Duplex 2205</b>	Very good corrosion resistance in CO <sub>2</sub> concentrations up to 35%	Excellent resistance to stress corrosion cracking in concentrations up to 30%	Very good resistance to general corrosion, pitting corrosion and occurrence of intergranular corrosion
<b>Universal</b>	Excellent corrosion resistance in every concentration	Excellent resistance to stress corrosion cracking and pitting corrosion under stress	Very good resistance to stress corrosion cracking and intergranular corrosion