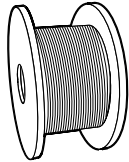


ZAPP PRECISION WIRE CARBON STEEL TO API 9A

QUALITY SYSTEM CERTIFIED TO ISO 9001:2015

ZAPP



CARBON STEEL WIRE FOR:

- _ Wirelines for down hole service applications

CHARACTERISTICS

Carbon steel IPS and EIP to API 9A provides good service for environments which do not require corrosion resistant material. It is our entry level product for oil patch wireline applications.

GOOD WIRELINE HANDLING PRACTICES

- _ Do not drop or damage spools
- _ Maintain adequate back tension during respooling and winding operations
- _ Maintain natural curvature of the wire during winding and respooling operations
- _ Do not rub on ground or non-rolling sheaves and bearing surfaces
- _ Do not allow loops, bends, or kinks to occur – this can damage or break the line
- _ Do clean the wireline after use

LIMITING CHEMICAL COMPOSITION OF CARBON STEEL (IPS AND EIP)

C	Si	Mn	P	S	Cr	Ni	Mo	Cu
0.56 – 0.85	0.15 – 0.35	0.4 – 0.8	0.020*	0.020*	0.10*	0.10*	0.02*	0.12*

*max.

Tensile strengths in the order of 230/280,000 psi are achieved through cold drawing. At these strength levels, the wire is ductile and able to successfully pass the wrap test in the as drawn condition. A successful wrap, bend, or torsion test shows no surface cracking or brittle failure.

PHYSICAL PROPERTIES OF CARBON STEEL WIRE AT ROOM TEMPERATURE

Density	0.29 [lb/in ³]
Modulus of elasticity, E	29.8 · 10 ⁶ [psi]
Coefficient of linear expansion	0.11 [mm/m] °C

ZAPP TECHNICAL DATA

WIRELINE MINIMUM BREAK LOAD, WT. PER FOOT, TORSIONS, ELONGATION

Wire size	Wt. per foot	IPS break load*	IPS torsions**	IPS elongation***	EIP break load*	EIP torsions
.072"	0.014#	961#	29	1.5 %	1150#	26
.082"	0.018#	1239#	26	1.5 %	1460#	23
.092"	0.023#	1547#	23	1.5 %	1830#	21
.108"	0.032#	2109#	19	1.5 %	2490#	18
.125"	0.042#	2794#	17	1.5 %	3300#	15
.140"	0.052#	3400#	16	1.5 %	4070#	14
.150"	0.060#	3900#	16	1.5 %	4580#	13
.160"	0.068#	4400#	15	1.5 %	5120#	12

* The recommended **safe working load** is 60% of minimum breaking load

** Torsions per 8" test length; reference ASTM A938 for test procedure

*** Elongation measured in 10" gauge length

- _ Diameter tolerances: ± 0.001 "
- _ All wirelines meet or exceed the requirements of API 9A
- _ All wirelines are 100 % weld free and supplied in continuous lengths
- _ All wirelines are wrap and torsion tested
- _ All wirelines have full traceability
- _ Eddy current testing available

ZAPP PRECISION WIRE

WIRE | BAR | PROFILE | FLAT WIRE

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