

오일 템퍼선

오일-템퍼선(Oil Quenching & Tempered Wire)은 우수한 내피로성, 내열성 및 고탄성을 지닌 제품으로 경강선, 피아노선에서는 달성할 수 없는 우수한 기계적 특성을 보유한 제품입니다. DSR의 오일-템퍼선은 고품질을 지향하는 자체의 엄격한 품질관리 시스템으로 관리하고 있으며, 고객사의 다양한 요구를 만족시킬 수 있도록 다양한 강종과 폭넓은 선경대의 제품을 생산하고 있습니다.

■ 제품규격

종류		화학성분 (%)							
		C	Si	Mn	P	S	Cu	Cr	V
Oil-Tempered Carbon Wire	KS, JIS	0.53 ~ 0.88	0.10 ~ 0.35	0.30 ~ 1.20	Max. 0.030	Max. 0.030	-	-	-
	ASTM	0.55 ~ 0.85	0.15 ~ 0.35	0.30 ~ 1.20	Max. 0.040	Max. 0.050	-	-	-
	EN(FD)	0.60 ~ 0.75	0.10 ~ 0.35	0.50 ~ 1.20	Max. 0.030	Max. 0.025	Max. 0.12	-	-
Oil-Tempered Cr-Si Alloyed Wire	KS, JIS	0.51 ~ 0.59	1.20 ~ 1.60	0.50 ~ 0.90	Max. 0.035	Max. 0.035	-	0.55 ~ 0.90	-
	ASTM	0.51 ~ 0.59	1.20 ~ 1.60	0.60 ~ 0.80	Max. 0.035	Max. 0.040	-	0.60 ~ 0.80	-
	EN(FD)	0.50 ~ 0.60	1.20 ~ 1.60	0.50 ~ 0.90	Max. 0.030	Max. 0.025	Max. 0.12	0.50 ~ 0.80	-
Oil-Tempered Carbon Wire for Valve Spring	KS, JIS	0.60 ~ 0.75	0.12 ~ 0.32	0.60 ~ 0.90	Max. 0.025	Max. 0.025	Max. 0.20	-	-
	ASTM	0.60 ~ 0.75	0.15 ~ 0.35	0.60 ~ 0.90	Max. 0.025	Max. 0.030	-	-	-
	EN(VD)	0.60 ~ 0.75	0.15 ~ 0.30	0.50 ~ 1.00	Max. 0.020	Max. 0.020	Max. 0.06	-	-
Oil-Tempered Cr-Si Alloyed Wire for Valve Spring	KS, JIS	0.51 ~ 0.59	1.20 ~ 1.60	0.50 ~ 0.80	Max. 0.025	Max. 0.025	Max. 0.20	0.50 ~ 0.80	-
	ASTM	0.51 ~ 0.59	1.20 ~ 1.60	0.50 ~ 0.80	Max. 0.025	Max. 0.025	-	0.60 ~ 0.80	-
	EN(VD)	0.50 ~ 0.60	1.20 ~ 1.60	0.50 ~ 0.90	Max. 0.025	Max. 0.020	Max. 0.06	0.50 ~ 0.80	-
Oil-Tempered Cr-Si-V Alloyed Wire for high Strength Valve Spring	KS, JIS	0.63 ~ 0.68	1.20 ~ 1.60	0.50 ~ 0.8	Max. 0.025	Max. 0.025	-	0.50 ~ 0.80	0.10 ~ 0.20
	ASTM	0.55 ~ 0.70	1.20 ~ 1.65	0.50 ~ 0.8	Max. 0.025	Max. 0.025	-	0.50 ~ 0.80	0.08 ~ 0.25
	EN(VD)	0.50 ~ 0.70	1.20 ~ 1.65	0.40 ~ 0.9	Max. 0.020	Max. 0.020	Max. 0.06	0.50 ~ 1.00	0.10 ~ 0.25

■ 포장사양

선경 (mm)	Block Dia. (Inch)	Carrier / Coil (Kg)
0.50 ~ 0.79	16	100
0.80 ~ 1.99	24	300
1.50 ~ 3.20	36	500
3.00 ~ 4.99	48	200 ~ 1,000
5.00 ~ 8.00	60	500 ~ 1,000
8.00 ~ 16.00	70	1,000 ~ 2,000

• 고객의 요청에 따라 0.5 ~ 2.3mm 범위에서는 Z2, Spool 및 Wooden Reel로 포장 가능함

■ 참고사항

종류		Specification			
		KS	JIS	ASTM	EN
Oil-Tempered Carbon Wire	SPEC	KS D 3579	JIS G 3560	ASTM A 229	EN 10270-2
	Grade	SWO-A, B	SWO-A, B	Class 1, 2	FDC
Oil-Tempered Cr-Si Alloyed Wire	SPEC	KS D 3579	JIS G 3560	ASTM A 401	EN 10270-2
	Grade	SWOSC-B	SWOSC-B	-	FDSiCr
Oil-Tempered Carbon Wire for Clutch Spring	SPEC	-	-	-	EN 10270-2
	Grade	-	-	-	TDC
Oil-Tempered Cr-Si Alloyed Wire for Clutch Spring	SPEC	-	-	ASTM A 1000	EN 10270-2
	Grade	-	-	Grade A	TDSiCr
Oil-Tempered Carbon Wire for Valve Spring	SPEC	KS D 3580	JIS G 3561	ASTM A 230	EN 10270-2
	Grade	SWO-V	SWO-V	OT Carbon Valve	VDC
Oil-Tempered Cr-Si Alloyed Wire for Valve Spring	SPEC	KS D 3580	JIS G 3561	ASTM A 877	EN 10270-2
	Grade	SWOSC-V	SWOSC-V	Grade A	VDSiCr
Oil-Tempered Cr-Si-V Alloyed Wire For Valve Spring	SPEC	-	-	ASTM A 877	EN 10270-2
	Grade	-	-	Grade B	VDSiCrV

오일 템퍼선

OIL-TEMPERED CARBON WIRE

제품규격 (KS D 3579 / JIS G 3560)

선경 (mm)	허용차 (mm)	흠 길이 (mm)	인장강도 (N/mm ²)				ROA (%)
			SWO-A		SWO-B		
			Min	Max	Min	Max	
2.00	±0.035	1% of Wire Dia.	1570	1720	1720	1860	45
2.30	±0.035		1570	1720	1720	1860	45
2.60	±0.035		1570	1720	1720	1860	45
2.90	±0.035		1520	1670	1670	1810	45
3.00	±0.035		1470	1620	1620	1770	45
3.20	±0.035		1470	1620	1620	1770	40
3.50	±0.045		1470	1620	1620	1770	40
4.00	±0.045		1420	1570	1570	1720	40
4.50	±0.045		1370	1520	1520	1670	40
5.00	±0.045		1370	1520	1520	1670	40
5.50	±0.045	1.4% of Wire Dia.	1320	1470	1470	1620	35
5.60	±0.045		1320	1470	1470	1620	35
6.00	±0.060		1320	1470	1470	1620	35
6.50	±0.060		1320	1470	1470	1620	35
5.60	±0.060		1320	1470	1470	1620	35
7.50	±0.060		1230	1370	1370	1520	35
8.00	±0.060		1230	1370	1370	1520	35
8.50	±0.060		1230	1370	1370	1520	30
9.00	±0.070		1230	1370	1370	1520	30
9.50	±0.070		1180	1320	1320	1470	30
10.00	±0.070		1180	1320	1320	1470	30
10.50	±0.090		1180	1320	1320	1470	30
11.00	±0.090		1180	1320	1320	1470	30
11.50	±0.090		1180	1320	1320	1470	30
12.00	±0.090		1180	1320	1320	1470	30
13.00	±0.090		-	-	-	-	30
14.00	±0.090		-	-	-	-	30
15.00	±0.090		-	-	-	-	-
16.00	±0.090	-	-	-	-	-	

• 0.5mm부터 생산 가능

제품규격 (ASTM A 229)

선경 (mm)		허용차 (inch)	인장강도 (ksi)			
			CLASS I		CLASS II	
			Min	Max	Min	Max
0.020	0.51	±0.0008	293	323	324	354
0.023	0.58	±0.0008	289	319	320	350
0.026	0.66	±0.001	286	316	317	347
0.029	0.74	±0.001	283	313	314	344
0.032	0.81	±0.001	280	310	311	341
0.035	0.89	±0.001	274	304	305	335
0.041	1.04	±0.001	266	296	297	327
0.048	1.22	±0.001	259	289	290	320
0.054	1.37	±0.001	253	283	284	314
0.063	1.60	±0.001	239	268	276	305
0.071	1.80	±0.001	235	264	270	299
0.079	2.00	±0.001	232	261	264	293
0.087	2.20	±0.002	229	258	260	289
0.098	2.50	±0.002	225	254	254	283
0.110	2.80	±0.002	220	249	248	276
0.118	3.00	±0.002	218	247	245	273
0.138	3.50	±0.002	210	235	238	265
0.157	4.00	±0.002	203	229	232	258
0.177	4.50	±0.002	200	226	226	252
0.197	5.00	±0.002	196	235	220	247
0.217	5.50	±0.002	191	218	218	244
0.236	6.00	±0.002	189	215	215	244
0.276	7.00	±0.002	186	210	210	236
0.315	8.00	±0.002	181	207	207	234
0.354	9.00	±0.002	177	203	205	231
0.394	10.00	±0.002	174	200	203	229
0.433	11.00	±0.002	171	196	200	226
0.472	12.00	±0.003	167	191	197	223
0.551	14.00	±0.003	162	189	194	220
0.630	16.00	±0.003	162	189	191	218

제품규격 (EN 10270-2 (FDC))

선경 (mm)		허용차 (mm)	인장강도 (MPa)		ROA (%)
			FDC		
			Min	Max	
0.50	0.60	±0.010	1900	2100	-
0.60	0.80	±0.010	1900	2100	-
0.80	1.00	±0.015	1860	2060	-
1.00	1.30	±0.020	1810	2010	45
1.30	1.40	±0.020	1790	1970	45
1.40	1.60	±0.020	1760	1940	45
1.60	2.00	±0.025	1720	1890	45
2.00	2.50	±0.025	1670	1820	45
2.50	2.70	±0.025	1640	1790	45
2.70	3.00	±0.030	1620	1770	45
3.00	3.20	±0.030	1600	1750	45
3.20	3.50	±0.030	1580	1730	42
3.50	4.00	±0.030	1550	1700	42
4.00	4.20	±0.035	1540	1690	40

선경 (mm)		허용차 (mm)	인장강도 (MPa)		ROA (%)
			FDC		
이상	Up to		Min	Max	
4.20	4.50	±0.035	1520	1670	40
4.50	4.70	±0.035	1510	1660	40
4.70	5.00	±0.035	1500	1650	40
5.00	5.60	±0.035	1470	1620	38
5.60	6.00	±0.040	1460	1610	38
6.00	6.50	±0.040	1440	1590	35
6.50	7.00	±0.040	1430	1580	35
7.00	8.00	±0.045	1400	1550	35
8.00	8.50	±0.045	1380	1530	32
8.50	10.00	±0.05	1360	1510	32
10.00	12.00	±0.07	1320	1470	30
12.00	14.00	±0.08	1280	1430	30
14.00	15.00	±0.08	1270	1420	-
15.00	16.00	±0.09	1250	1400	-

OIL-TEMPERED Cr-Si ALLOYED WIRE

제품규격 (KS D 3579 / JIS G 3560)

선경 (mm)	허용차 (mm)	인장강도 (N/mm ²)		ROA (%)
		SWOSC-B		
		Min	Max	
1.00	±0.025	1960	2110	45
1.20	±0.025	1960	2110	45
1.40	±0.035	1960	2110	45
1.60	±0.035	1960	2110	45
1.80	±0.035	1960	2110	45
2.00	±0.035	1910	2110	45
2.30	±0.035	1910	2110	45
2.60	±0.035	1910	2060	45
2.90	±0.035	1910	2060	45
3.00	±0.035	1860	2010	45
3.20	±0.035	1860	2010	40
3.50	±0.045	1860	2010	40
4.00	±0.045	1810	1960	40
4.50	±0.045	1810	1960	40
5.00	±0.045	1760	1910	40
5.50	±0.045	1760	1910	35
5.60	±0.045	1710	1860	35
6.00	±0.060	1710	1860	35
6.50	±0.060	1710	1860	35
7.00	±0.060	1660	1810	35
7.50	±0.060	1660	1810	35
8.00	±0.060	1660	1810	35
8.50	±0.060	1660	1810	30
9.00	±0.070	1660	1810	30
9.50	±0.070	1660	1810	30
10.00	±0.070	1660	1810	30
10.50	±0.090	1660	1810	30
11.00	±0.090	1660	1810	30
11.50	±0.090	1660	1810	30
12.00	±0.090	1610	1760	30
13.00	±0.090	1610	1760	30
14.00	±0.090	1610	1760	30
15.00	±0.090	1610	1760	-
16.00	±0.090	1610	1760	-

• 0.5mm부터 생산 가능

오일 템퍼선

OIL-TEMPERED Cr-Si ALLOYED WIRE

제품규격 (ASTM A 401)

선경		허용차 (Inch)	인장강도 (ksi)		ROA (%)
inch	mm		Min	Max	
0.032	0.80	±0.001	300	325	-
0.041	1.00	±0.001	298	323	-
0.054	1.40	±0.001	292	317	-
0.062	1.60	±0.001	290	315	-
0.071	1.80	±0.001	284	310	-
0.079	2.00	±0.001	281	307	-
0.087	2.20	±0.002	278	305	-
0.098	2.50	±0.002	276	302	45
0.110	2.80	±0.002	273	299	45
0.118	3.00	±0.002	270	296	45
0.138	3.50	±0.002	267	293	40
0.157	4.00	±0.002	264	290	40
0.177	4.50	±0.002	261	287	40
0.197	5.00	±0.002	258	284	40
0.217	5.50	±0.002	255	281	40
0.236	6.00	±0.002	249	278	40
0.276	7.00	±0.002	247	273	40
0.315	8.00	±0.002	244	270	40
0.354	9.00	±0.002	241	267	40
0.394	10.00	±0.002	238	264	40
0.433	11.00	±0.002	235	261	35
0.472	12.00	±0.003	232	254	35
0.551	14.00	±0.003	228	249	30
0.630	16.00	±0.003	225	248	30

• 0.5mm부터 생산 가능

제품규격 (EN 10270-2 (FDSiCr))

선경 (mm)		허용차 (mm)	인장강도 (MPa)		ROA (%)
			FDSiCr		
이상	Up to		Min	Max	
0.50	0.60	±0.010	2100	2300	-
0.60	0.80	±0.010	2100	2300	-
0.80	1.00	±0.015	2100	2300	-
1.00	1.30	±0.020	2070	2260	45
1.30	1.40	±0.020	2060	2250	45
1.40	1.60	±0.020	2040	2220	45
3.20	3.50	±0.030	1900	2060	42
3.50	4.00	±0.030	1870	2030	42
4.00	4.20	±0.035	1860	2020	40
4.20	4.50	±0.035	1850	2000	40
4.50	4.70	±0.035	1840	1990	40
4.70	5.00	±0.035	1830	1980	40
5.00	5.60	±0.035	1800	1950	38
5.60	6.00	±0.040	1780	1930	38
6.00	6.50	±0.040	1760	1910	35
6.50	7.00	±0.040	1740	1890	35
7.00	8.00	±0.045	1710	1860	35
8.00	8.50	±0.045	1700	1850	32
8.50	10.00	±0.050	1660	1810	32
10.00	12.00	±0.070	1620	1770	30
12.00	14.00	±0.080	1580	1730	30
14.00	15.00	±0.080	1570	1720	-
15.00	16.00	±0.090	1550	1700	-

제품규격 (ASTM A 1000)

선경		허용차 (inch)	인장강도 (ksi)		ROA (%)
			강종 A		
inch	mm		Min	Max	
0.020	0.51	± 0.0008	305	330	-
0.040	1.02	± 0.0008	300	325	-
0.060	1.52	± 0.0008	295	320	-
0.080	2.03	± 0.0010	290	310	-
0.105	2.67	± 0.0010	284	304	45
0.120	3.05	± 0.0010	280	300	45
0.156	3.96	+ 0.0015	275	295	40
0.177	4.50	± 0.0015	265	285	40
0.200	5.08	± 0.0015	263	283	40
0.218	5.54	± 0.0015	260	280	40
0.250	6.35	± 0.0015	255	275	40
0.312	7.92	± 0.0015	250	270	40
0.375	9.53	± 0.0015	245	265	40
0.438	11.13	± 0.0020	240	260	35
0.500	12.70	± 0.0020	235	255	35
0.562	14.27	± 0.0020	233	253	30
0.625	15.88	± 0.0020	231	251	30

OIL-TEMPERED CARBON WIRE FOR VALVE SPRING

제품규격 (KS D 3580 / JIS G 3561)

선경 (mm)	허용차 (mm)	인장강도 (N/mm ²)		ROA (%)
		SWO-V		
		Min	Max	
2.00	±0.020	1620	1770	45
2.30	±0.020	1620	1770	45
2.60	±0.020	1620	1770	45
2.90	±0.020	1620	1770	45
3.00	±0.020	1570	1720	45
3.20	±0.020	1570	1720	45
3.50	±0.030	1570	1720	45
4.00	±0.030	1570	1720	40
4.50	±0.030	1520	1670	40
5.00	±0.030	1520	1670	40
5.50	±0.030	1470	1620	40
5.60	±0.030	1470	1620	40
6.00	±0.040	1470	1620	40
6.50	±0.040	-	-	40
7.00	±0.040	-	-	40
8.00	±0.040	-	-	40

• 0.5mm부터 생산 가능

제품규격 (ASTM A 230)

선경		인장강도 (ksi)		ROA (%)
inch	mm	Min	Max	
0.061	1.55	245	265	-
0.062	1.57	240	260	-
0.072	1.83	240	260	-
0.075	1.91	240	260	-
0.080	2.03	240	260	-
0.092	2.34	240	260	-
0.106	2.69	235	255	40
0.128	3.25	235	255	40
0.135	3.43	230	250	40
0.148	3.76	230	250	40
0.162	4.11	230	250	40
0.177	4.50	225	245	40
0.192	4.88	225	245	40
0.207	5.26	220	240	40
0.225	5.72	220	240	40
0.244	6.20	215	235	40
0.250	6.35	215	235	40

• 0.5mm부터 생산 가능

제품규격 (EN 10270-2 (TDC, VDC))

선경 (mm)		허용차 (mm)	인장강도 (N/mm ²)		ROA (%)
			TDC, VDC		
이상	Up to		Min	Max	
0.50	0.60	±0.010	1850	2000	-
0.60	0.60	±0.010	1850	2000	-
0.80	1.00	±0.015	1850	1950	-
1.00	1.30	±0.020	1750	1850	-
1.30	1.40	±0.020	1700	1800	-
1.40	1.60	±0.020	1700	1800	-
1.60	2.00	±0.025	1670	1770	50
2.00	2.50	±0.025	1630	1730	50
2.50	2.70	±0.025	1600	1800	50
2.70	3.00	±0.030	1600	1700	50
3.00	3.20	±0.030	1570	1670	45
3.20	3.50	±0.030	1570	1670	45
3.50	4.00	±0.030	1550	1650	45
4.00	4.20	±0.035	1550	1650	45
4.20	4.50	±0.035	1550	1650	45
4.50	4.70	±0.035	1540	1640	45
4.70	5.00	±0.035	1540	1640	40
5.00	5.60	±0.040	1520	1820	40
5.60	6.00	±0.040	1470	1570	40
6.00	6.50	±0.040	1470	1570	40
6.50	7.00	±0.045	1420	1520	40
7.00	8.00	±0.045	1390	1490	35

OIL-TEMPERED Cr-Si ALLOYED WIRE FOR VALVE SPRING

제품규격 (KS D 3580 / JIS G 3561)

선경 (mm)	허용차 (mm)	인장강도 (N/mm ²)		ROA (%)
		SWOSC-V		
		Min	Max	
0.50	±0.020	2010	2160	-
0.60	±0.020	2010	2160	-
0.70	±0.020	2010	2160	-
0.80	±0.020	2010	2160	-
0.90	±0.020	2010	2160	-
1.00	±0.020	2010	2160	45
1.20	±0.020	2010	2160	45
1.40	±0.020	1960	2110	45
1.60	±0.020	1960	2110	45
1.80	±0.020	1960	2110	45
2.00	±0.020	1910	2060	45
2.30	±0.020	1910	2060	45
2.60	±0.020	1910	2060	45
2.90	±0.020	1910	2060	45
3.00	±0.020	1860	2010	45
3.20	±0.020	1860	2010	45
3.50	±0.030	1860	2010	45
4.00	±0.030	1810	1960	40
4.50	±0.030	1810	1960	40
5.00	±0.030	1760	1910	40
5.50	±0.030	1760	1910	40
5.60	±0.030	1710	1860	40
6.00	±0.040	1710	1860	40
6.50	±0.040	1710	1860	40
7.00	±0.040	1660	1810	40
7.50	±0.040	1660	1810	40
8.00	±0.040	1660	1810	40

제품규격 (ASTM A 877 Grade A)

선경		인장강도 (ksi)		ROA (%)
inch	mm	Min	Max	
0.020	0.50	305	330	-
0.040	1.00	300	325	-
0.060	1.50	295	320	-
0.080	2.00	290	310	45
0.120	3.00	280	300	45
0.148	3.75	275	295	40
0.177	4.50	265	285	40
0.200	5.00	263	283	40
0.225	5.70	260	280	40
0.250	6.30	255	275	40
0.312	7.90	250	270	40

제품규격 (EN 10270-2 (TDSiCr, VDSiCr))

선경 (mm)		허용차 (mm)	인장강도 (MPa)		ROA (%)
			TDSiCr, VDSiCr (MPa)		
이상	Up to		Min	Max	
0.50	0.60	±0.010	2080	2230	-
0.60	0.80	±0.010	2080	2230	-
0.80	1.00	±0.015	2080	2230	-
1.00	1.30	±0.020	2080	2230	-
1.30	1.40	±0.020	2060	2210	50
1.40	1.60	±0.020	2060	2210	50
1.60	2.00	±0.025	2010	2160	50
2.00	2.50	±0.025	1960	2100	50
2.50	2.70	±0.025	1910	2010	50
2.70	3.00	±0.030	1910	2010	50
3.00	3.20	±0.030	1910	2010	45
3.20	3.50	±0.030	1910	2010	45
3.50	4.00	±0.030	1860	1960	45
4.00	4.20	±0.035	1860	1960	45
4.20	4.50	±0.035	1860	1960	45
4.50	4.70	±0.035	1810	1910	40
4.70	5.00	±0.035	1810	1910	40
5.00	5.60	±0.040	1810	1910	40
5.60	6.00	±0.040	1760	1860	40
6.00	6.50	±0.040	1760	1860	40
6.50	7.00	±0.045	1710	1810	40
7.00	8.00	±0.045	1710	1810	35

오일 템퍼선

OIL-TEMPERED Cr-Si-V ALLOYED WIRE FOR VALVE SPRING

제품규격 (KS D 3580 / JIS G 3561)

선경 (mm)	허용차 (mm)	인장강도		ROA (%)
		SWOCV-V		
		Min	Max	
0.50	±0.020	2010	2160	-
0.60	±0.020	2010	2160	-
0.70	±0.020	2010	2160	-
0.80	±0.020	2010	2160	-
0.90	±0.020	2010	2160	-
1.00	±0.020	2010	2160	45
1.20	±0.020	2010	2160	45
1.40	±0.020	1960	2110	45
1.60	±0.020	1960	2110	45
1.80	±0.020	1960	2110	45
2.00	±0.020	1570	1720	45
2.30	±0.020	1570	1720	45
2.60	±0.020	1570	1720	45
2.90	±0.020	1570	1720	45
3.00	±0.020	1570	1720	45
3.20	±0.020	1570	1720	45
3.50	±0.030	1570	1720	45
4.00	±0.030	1520	1670	40
4.50	±0.030	1520	1670	40
5.00	±0.030	1470	1620	40
5.50	±0.030	1470	1620	40
5.60	±0.030	1470	1620	40
6.00	±0.040	1470	1620	40
6.50	±0.040	1420	1570	40
7.00	±0.040	1420	1570	40
7.50	±0.040	1370	1520	40
8.00	±0.040	1370	1520	40

제품규격 (ASTM A 877 (강종 B))

선경		인장강도 (ksi)		ROA (%)
inch	mm	Min	Max	
0.020	0.50	320	345	-
0.040	1.00	315	340	-
0.060	1.50	310	335	-
0.080	2.00	305	325	40
0.120	3.00	300	320	40
0.148	3.75	295	315	35
0.177	4.50	290	310	35
0.200	5.00	285	305	35
0.225	5.70	280	300	35
0.250	6.30	275	295	35
0.312	7.90	270	290	35

제품규격 (EN 10270-2 (TDSiCrV, VDSiCrV))

선경 (mm)		허용차 (mm)	인장강도 (MPa)		ROA (%)
이상	Up to		Min	Max	
0.50	0.60	±0.010	2230	2380	-
0.60	0.80	±0.010	2230	2380	-
0.80	1.00	±0.015	2230	2380	-
1.00	1.30	±0.020	2230	2380	50
1.30	1.40	±0.020	2210	2360	50
1.40	1.60	±0.020	2210	2360	50
1.50	1.60	±0.020	2210	2360	50
1.60	2.00	±0.025	2160	2310	50
2.00	2.50	±0.025	2100	2250	50
2.50	2.70	±0.025	2060	2210	45
2.70	3.00	±0.030	2060	2210	45
3.00	3.20	±0.030	2060	2210	45
3.20	3.50	±0.030	2010	2160	45
3.50	4.00	±0.030	2010	2160	45
4.00	4.20	±0.035	1960	2110	45
4.20	4.50	±0.035	1960	2110	45
4.50	4.70	±0.035	1960	2110	40
4.70	5.00	±0.035	1960	2110	40
5.00	5.60	±0.035	1910	2060	35
5.60	6.00	±0.040	1910	2060	35
6.00	6.50	±0.040	1910	2060	35
6.50	7.00	±0.040	1860	2010	35
7.00	8.00	±0.040	1860	2010	35