

**KSW** Korea Steel Wire

High Carbon Music Spring Wire  
Stainless Steel Spring Wire

[www.sjhanscorp.com](http://www.sjhanscorp.com) | [www.shwire.com](http://www.shwire.com)



**S&J HANS**  
**SH WIRE**

# KSW

Korea Steel Wire

## INTRODUCTION

We are a leading Korean manufacturer and supplier who connect you with premium high carbon steel wires and stainless steel wires exclusively produced by our factory in South Korea.

We take pride in offering our brand of KSW (Korea Steel Wire) to the global market and have been providing top-quality materials with engineering assistance for over 30 years of our teamwork.

Our vision is to continually bring you outstanding service and to exceed customer's quality expectations through our finest quality wire.





## TABLE OF CONTENT

High Carbon Hard Drawn Steel Wire . . . . .	P. 4 - 5
High Carbon Music Spring Wire . . . . .	P. 6 - 7
Stainless Steel Spring Wire . . . . .	P. 8 - 9
Stainless Steel Wire for General Purpose . . . . .	P. 10 - 11



# BRIGHT HARD DRAWN STEEL WIRE

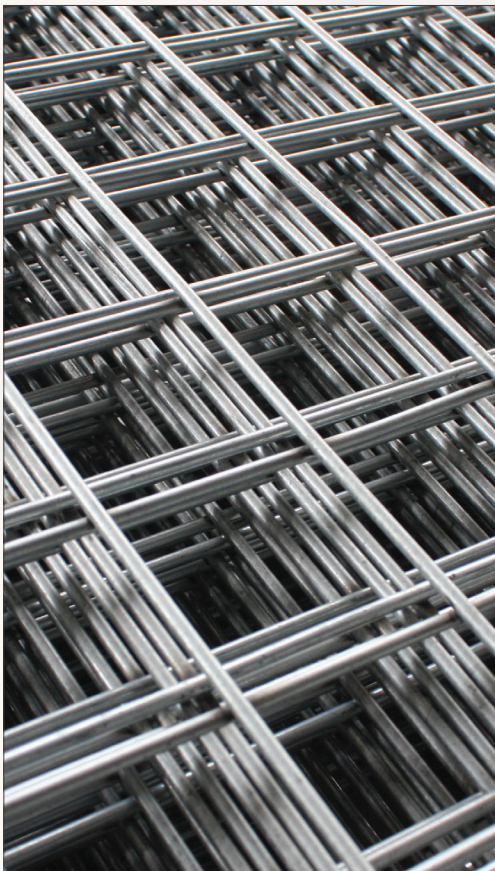
Hard drawn steel wire is manufactured by cold drawing process with 0.4% - 0.8% carbon wire rod.

This wire with ASTM A-227 Class I & II tensile is available on application of spring for general purposes, machinery, agriculture, and so on.

Korea Steel Wire (KSW) creating top quality wire is going to be always with the customers.

## CHEMICAL COMPOSITION (%) (ASTM A227 CLASS I & II)

Element	Composition
Carbon ( C )	0.45% - 0.85%
Manganese (Mn)	0.30% - 1.30%
Phosphorus (P)	0.04% Max
Sulfur (Si)	0.05% Max.
Silicon (Cu)	0.15% - 0.35%



## TENSILE REQUIREMENT (ASTM A227)

Dia.	CLASS I		CLASS II	
	T/S (ksi)		T/S (ksi)	
(Inch)	MIN	MAX	MIN	MAX
0.020	283	323	324	364
0.023	279	319	320	360
0.026	275	315	316	356
0.029	271	311	312	352
0.032	266	306	307	347
0.035	261	301	302	342
0.041	255	293	294	332
0.048	248	286	287	325
0.054	243	279	280	316
0.062	237	272	273	308
0.072	232	266	267	301
0.080	227	261	262	296
0.092	220	253	254	287
0.106	216	248	249	281
0.120	210	241	242	273
0.135	206	237	238	269
0.148	203	234	235	266
0.162	200	230	231	261
0.177	195	225	226	256
0.192	192	221	222	251
0.207	190	218	219	247
0.225	186	214	215	243
0.250	182	210	211	239
0.312	174	200	201	227
0.375	167	193	194	220
0.438	165	190	191	216
0.500	156	180	181	205

## CATCHWEIGHT COIL PACKAGING

Dia (Inch)	Cast I.D.	Max Weight (Lbs)
0.020 - 0.031	12"	110
0.032 - 0.054	16"	220
0.055 - 0.070	20"	440
0.071 - 0.117	24"	550
0.118 - 0.236	30"	660
0.237 - 0.500	36"	660

## CONTINUOUS COIL ON CARRIER PACKAGING

Dia (Inch)	Cast I.D.	Max Weight (Lbs)
0.032 - 0.054	16"	880
0.055 - 0.070	20"	1,300
0.071 - 0.117	24"	1,800
0.118 - 0.236	30"	2,200
0.237 - 0.500	36"	4,400

# GALVANIZED HARD DRAWN STEEL WIRE

Galvanized Hard drawn steel MB wire has the standard specification of ASTM A764 for metallic coated carbon steel wire, coated at size and drawn to size for mechanical springs.

## CHEMICAL COMPOSITION (%) (ASTM A764 CLASS I & II)

Element	Composition
Carbon (C)	0.45% - 0.85%
Manganese (Mn)	0.30% - 1.30%
Phosphorus (P)	0.04% Max
Sulfur (Si)	0.05% Max.
Silicon (Cu)	0.15% - 0.35%



## FINISH 1 (DRAWN TO SIZE METALLIC COATED), REGULAR OR CLASS 1 COATING

Dia. (Inch)	CLASS I T/S (ksi)		CLASS II T/S (ksi)	
	MIN	MAX	MIN	MAX
0.032	253	306	292	347
0.035	248	301	287	342
0.041	242	293	279	332
0.048	236	286	273	325
0.054	231	279	266	316
0.062	225	272	259	308
0.072	220	266	254	301
0.080	216	261	249	296
0.092	209	253	241	287
0.106	205	248	237	281
0.120	200	241	230	273
0.135	196	237	226	269
0.148	193	234	223	266

## FINISH 2 (METALLIC COATED AT SIZE), REGULAR, CLASS 1 OR CLASS 3 COATING

Dia. (Inch)	CLASS I T/S (ksi)		CLASS II T/S (ksi)	
	MIN	MAX	MIN	MAX
0.062	213	272	232	291
0.072	209	266	227	284
0.080	204	261	223	280
0.092	198	253	216	271
0.106	194	248	212	266
0.120	189	241	206	258
0.135	185	237	202	254
0.148	183	234	200	251

## CATCHWEIGHT COIL PACKAGING

Dia (Inch)	Cast I.D.	Max Weight (Lbs)
0.032 - 0.054	16"	220
0.055 - 0.070	20"	440
0.071 - 0.117	24"	550
0.118 - 0.148	30"	660

## CONTINUOUS COIL ON CARRIER PACKAGING

Dia (Inch)	Cast I.D.	Max Weight (Lbs)
0.032 - 0.054	16"	880
0.055 - 0.070	20"	1,300
0.071 - 0.117	24"	1,800
0.118 - 0.148	30"	2,200

# MUSIC SPRING WIRE

Music wire has high tensile strength, high ductility and excellent fatigue life. Our music wire meets the latest revisions of ASTM A228/A228M-16.

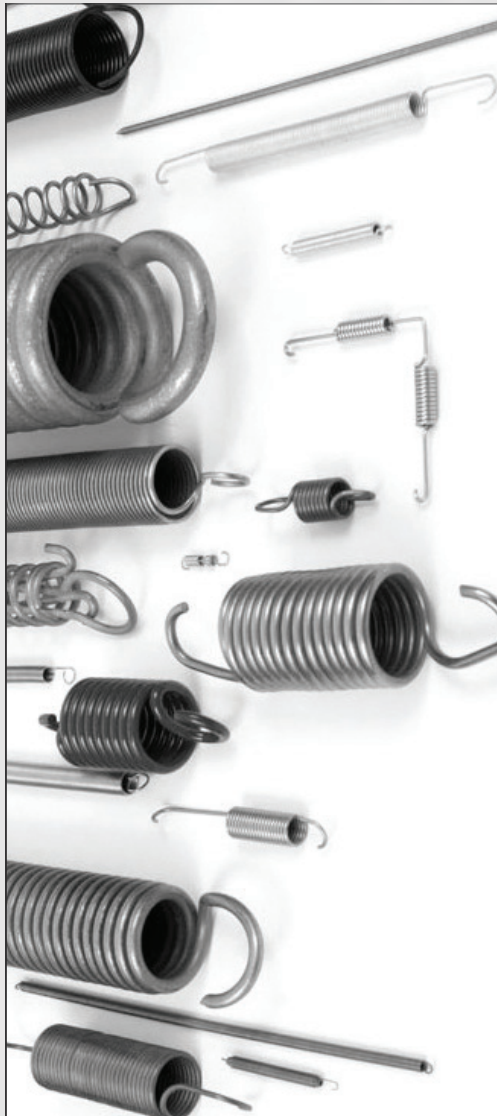
» Type I : wire shall be directly drawn from either as-rolled rods or from air patented rods or wire to the final wire diameter.

» Type II : wire shall be drawn from either patented rod or patented wire to the final wire diameter. All patenting is not allowed.

Phosphate coated and galvanized music wire are available from our mill in Korea.  
Korea Steel Wire (KSW) creating top quality wire is going to be always with the customers.

## CHEMICAL COMPOSITION (%) (ASTM A228)

Element	Composition
Carbon ( C )	0.70% - 1.00%
Manganese (Mn)	0.20% - 0.60%
Phosphorus (P)	0.025% Max
Sulfur (Si)	0.025% Max.
Silicon (Cu)	0.10% - 0.30%



## TENSILE REQUIREMENT (ASTM A228)

Dia. (Inch)	T/S (ksi)	
	MIN	MAX
0.008	399	441
0.009	393	434
0.010	387	428
0.011	382	422
0.012	377	417
0.013	373	412
0.014	369	408
0.015	365	404
0.016	362	400
0.018	356	393
0.020	350	387
0.022	345	382
0.024	341	377
0.026	337	373
0.028	333	368
0.030	330	365
0.032	327	361
0.034	324	358
0.036	321	355
0.038	318	352
0.040	315	349
0.042	313	346
0.045	309	342
0.048	306	339
0.051	303	335
0.052	302	333
0.055	300	331
0.059	296	327
0.063	293	324

## TENSILE REQUIREMENT (ASTM A228)

Dia. (Inch)	T/S (ksi)	
	MIN	MAX
0.067	290	321
0.072	287	317
0.076	284	314
0.079	283	313
0.080	282	312
0.085	279	308
0.090	276	305
0.095	274	303
0.100	271	300
0.102	270	299
0.107	268	296
0.110	267	295
0.112	266	294
0.121	263	290
0.125	261	288
0.130	259	286
0.135	258	285
0.138	256	283
0.140	256	283
0.145	254	281
0.150	253	279
0.156	251	277
0.162	249	275
0.177	245	270
0.192	241	267
0.207	238	264
0.225	235	260
0.250	230	255

## PHOSPHATE COATED MUSIC WIRE

### CATCHWEIGHT COIL PACKAGING

Dia (Inch)	Cast I.D.	Max Weight (Lbs)
0.008 - 0.011	6"	11
0.012 - 0.019	8"	22
0.020 - 0.031	12"	110
0.032 - 0.054	16"	220
0.055 - 0.070	20"	440
0.071 - 0.117	24"	550
0.118 - 0.250	30"	660



### CONTINUOUS COIL ON CARRIER PACKAGING

Dia (Inch)	Cast I.D.	Max Weight (Lbs)
0.032 - 0.054	16"	880
0.055 - 0.070	20"	1,300
0.071 - 0.117	24"	1,800
0.118 - 0.250	30"	2,200



## GALVANIZED MUSIC WIRE

### CATCHWEIGHT COIL PACKAGING

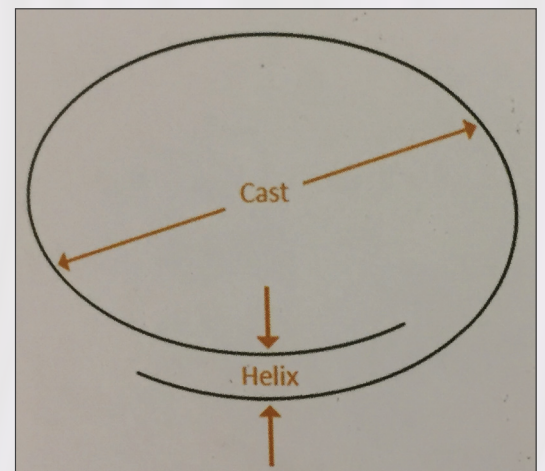
Dia (Inch)	Cast I.D.	Max Weight (Lbs)
0.008 - 0.011	6"	11
0.012 - 0.019	8"	22
0.020 - 0.031	12"	110
0.032 - 0.054	16"	220
0.055 - 0.070	20"	440
0.071 - 0.079	24"	550

### CONTINUOUS COIL ON CARRIER PACKAGING

Dia (Inch)	Cast I.D.	Max Weight (Lbs)
0.032 - 0.054	16"	880
0.055 - 0.070	20"	1,300
0.071 - 0.079	24"	1,800

## CAST & HELIX

Dia (Inch)	Cast I.D.	Cast (Inch)	Helix (Inch)
0.008 - 0.016	8"	7.87 - 11.81	1.18
0.016 - 0.020	8"	7.87 - 11.81	
	10"	9.84 - 14.57	
0.020 - 0.031	12"	11.81 - 17.72	1.97
0.031 - 0.035	16"	15.75 - 23.62	
0.035 - 0.039			
0.039 - 0.071	24"	23.62 - 35.43	2.36
0.071 - 0.091			
0.091 - 0.250			



# STAINLESS STEEL SPRING WIRE

Korea Steel Wire (KSW) is providing the top quality stainless spring wire with excellent surface, close cast & helix control for a uniformity of spring coiling.

They are applied for aerosol spring, compression spring, tension spring, forming spring etc.

**Surface finish : S-Co, Bright, Ni-Co, Ni-Co Bright are available.**

## CHEMICAL COMPOSITION (%) IN REQUIREMENTS

Type		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N	Other
302	min						8.00	17.00				
	max	0.12	1.00	2.00	0.045	0.030	10.00	19.00			0.10	
304	min						8.00	18.00				
	max	0.08	1.00	2.00	0.045	0.030	10.50	20.00			0.10	
316	min						10.50	16.50	2.00			
	max	0.07	1.00	2.00	0.045	0.030	13.50	18.00	2.50		1.00	
321	min						9.00	17.00				Ti 5 X C min
	max	0.08	1.00	2.00	0.045	0.030	12.00	19.00				
347	min						9.00	17.00				"(Cb + Ta) 10 X C min
	max	0.08	1.00	2.00	0.045	0.030	13.00	19.00				
631 (17-7)	min						6.50	16.00				Al 0.75-1.50
	max	0.09	1.00	1.00	0.040	0.030	7.80	18.00				

## TENSILE REQUIREMENT (ASTM A313)

AISI 302 and 304	
Dia. (Inch)	T/S (ksi)
0.009 - 0.010	320 - 350
0.010 - 0.011	318 - 348
0.011 - 0.012	316 - 346
0.012 - 0.013	314 - 344
0.013 - 0.014	312 - 342
0.014 - 0.015	310 - 340
0.015 - 0.016	308 - 338
0.016 - 0.017	306 - 336
0.017 - 0.018	304 - 334
0.018 - 0.020	300 - 330
0.020 - 0.022	296 - 326
0.022 - 0.024	292 - 322
0.024 - 0.026	291 - 320
0.026 - 0.028	289 - 318
0.028 - 0.031	285 - 315
0.031 - 0.034	282 - 310
0.034 - 0.037	280 - 308
0.037 - 0.041	275 - 304
0.041 - 0.045	272 - 300

AISI 302 and 304	
Dia. (Inch)	T/S (ksi)
0.045 - 0.050	267 - 295
0.050 - 0.054	265 - 293
0.054 - 0.058	261 - 289
0.058 - 0.063	258 - 285
0.063 - 0.070	252 - 281
0.070 - 0.075	250 - 278
0.075 - 0.080	246 - 275
0.080 - 0.087	242 - 271
0.087 - 0.095	238 - 268
0.095 - 0.105	232 - 262
0.105 - 0.115	227 - 257
0.115 - 0.125	222 - 253
0.125 - 0.135	217 - 248

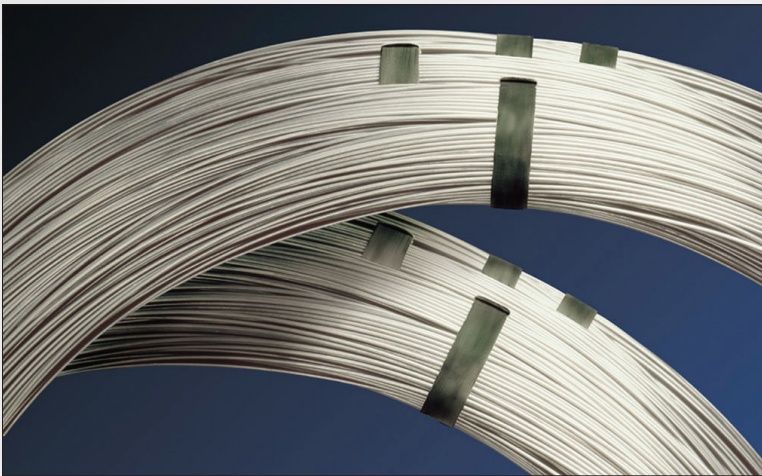
AISI 316, 321, 347	
Dia. (Inch)	T/S (ksi)
0.010 - 0.015	240 - 270
0.015 - 0.024	235 - 265
0.024 - 0.041	235 - 265
0.041 - 0.047	230 - 260
0.047 - 0.054	225 - 255
0.054 - 0.062	220 - 250
0.062 - 0.072	215 - 245
0.072 - 0.080	210 - 240
0.080 - 0.092	205 - 235
0.092 - 0.105	200 - 230
0.105 - 0.120	195 - 225

AISI 631 (17-7)	
Dia. (Inch)	T/S (ksi)
0.010 - 0.015	335 - 365
0.015 - 0.020	330 - 360
0.020 - 0.029	325 - 355
0.029 - 0.041	320 - 350
0.041 - 0.051	310 - 340
0.051 - 0.061	305 - 335
0.061 - 0.071	297 - 327
0.071 - 0.086	292 - 322
0.086 - 0.090	282 - 312
0.090 - 0.100	279 - 309
0.100 - 0.106	274 - 304
0.106 - 0.120	272 - 302





## PACKING



### COIL TYPE (S-CO)

Dia. (Inch)	Cast ID	Max. Weight (Lbs)
0.0090 - 0.0118	8"	20
0.0120 - 0.0157	10"	20
0.0158 - 0.0177	10"	30
0.0178 - 0.0196	12"	40
0.0200 - 0.0314	12"	60
0.0315 - 0.0629	16"	100
0.0630 - 0.0669	16"	200
0.0670 - 0.0715	20"	200 - 350
0.0720 - 0.0785	24"	200 - 400
0.0788 - 0.1350	24"	400 - 1000



### CONTINUOUS COIL ON CARRIER

Dia. (Inch)	Cast ID	Max. Weight (Lbs)
0.0720 - 0.1350	24"	1600 - 2200

## SPOOL TYPE & DIMENSIONS

Dia. (Inch)	Type	Max. Weight (Lbs)
0.0080 - 0.0118	DIN 200	20
0.0080 - 0.0118	DIN 250	30
0.0120 - 0.0157	DIN 250	45
0.0158 - 0.0355	DIN 355	80
0.0080 - 0.0157	SH 390	33
0.0158 - 0.0355	SH460	80
0.0200 - 0.0355	Steel Reel 22"	350
0.0237 - 0.0689	Steel Reel 30"	660

Model	Flange (mm)	Barrel (mm)	Traverse (mm)	Arbor Hole (mm)
DIN 200	200	125	160	22
DIN 250	250	160	160	22
DIN 355	355	224	160	36
SH 390	390	310	79	305
SH 460	460	319	91	305
Steel Reel 22"	560	300	200	38/32
Steel Reel 30"	760	400	285	38/32

# STAINLESS STEEL WIRE FOR GENERAL PURPOSE

Korea Steel Wire (KSW) is manufacturing top quality stainless steel wire for general purpose having all kinds of grade for various applications. Our wires meet mechanical properties to reach the production range from full hard to soft conforming to our customer's demands. AISI 302, 304, 304L, 316 & 316L are available.

## TENSILE REQUIREMENT AND PACKING (FOR SURFACE FINISH : BRIGHT)

### 1/4 HARD

Dia. (Inch)	T/S (ksi)
0.010 - 0.024	155 - 193
0.025 - 0.031	149 - 178
0.032 - 0.078	142 - 178
0.079 - 0.197	136 - 173
0.198 - 0.205	109 - 168

Dia.(Inch)	Coil Dia. (Inch)	Coil (Lb)	Carrier (Lb)	Spool (Lb)
0.010 - 0.016	8"	7		11 - 13
0.010 - 0.024	8"	11		22 - 29
0.016 - 0.028	10"	22		49 - 53
0.029 - 0.031	14"	88		
0.032 - 0.055	14"	110		
0.036 - 0.079	16"	110		
0.080 - 0.205	24"	220	1100	

### 1/2 HARD

Dia. (Inch)	T/S (ksi)
0.010 - 0.063	164 - 213
0.064 - 0.071	157 - 206

Dia.(Inch)	Coil Dia. (Inch)	Coil (Lb)	Spool (Lb)
0.010	8"	7	11 - 13
0.011 - 0.024	8"	11	22 - 29
0.016 - 0.028	10"	22	49 - 53
0.029 - 0.031	14"	88	
0.032 - 0.071	14"	110	

### 3/4 HARD

Dia. (Inch)	T/S (ksi)
0.003 - 0.008	239 - 276
0.009 - 0.024	232 - 268
0.025 - 0.039	222 - 258
0.040 - 0.055	210 - 247

Dia.(Inch)	Coil Dia. (Inch)	Coil (Lb)
0.008 - 0.010	8"	7
0.011 - 0.024	8"	11
0.016 - 0.028	10"	22
0.029 - 0.031	14"	88
0.032 - 0.055	14"	110
0.056 - 0.071	16"	110
0.072 - 0.126	24"	220

Dia.(Inch)	Spool (Lb)
0.003 - 0.004	2 - 3
0.005 - 0.016	11 - 13
0.008 - 0.020	22 - 29
0.012 - 0.024	49 - 53

### FULL HARD

Dia. (Inch)	T/S (ksi)
0.003 - 0.008	312 - 348
0.009 - 0.016	297 - 334
0.017 - 0.024	283 - 319
0.025 - 0.039	268 - 305

Dia.(Inch)	Coil Dia. (Inch)	Coil (Lb)
0.008 - 0.010	8"	7
0.011 - 0.024	8"	11
0.016 - 0.026	10"	22
0.027 - 0.031	14"	66
0.032 - 0.033	14"	88
0.034 - 0.063	16"	110
0.071 - 0.118	24"	220

Dia.(Inch)	Spool (Lb)
0.003 - 0.004	2 - 3
0.005 - 0.016	11 - 13
0.008 - 0.020	22 - 29
0.012 - 0.024	49 - 53



**TENSILE REQUIREMENT (FOR SURFACE FINISH : DULL)**

**1/4 HARD**

Dia. (Inch)	T/S (ksi)
0.079 - 0.197	136 - 173
0.198 - 0.205	109 - 168

**1/2 HARD**

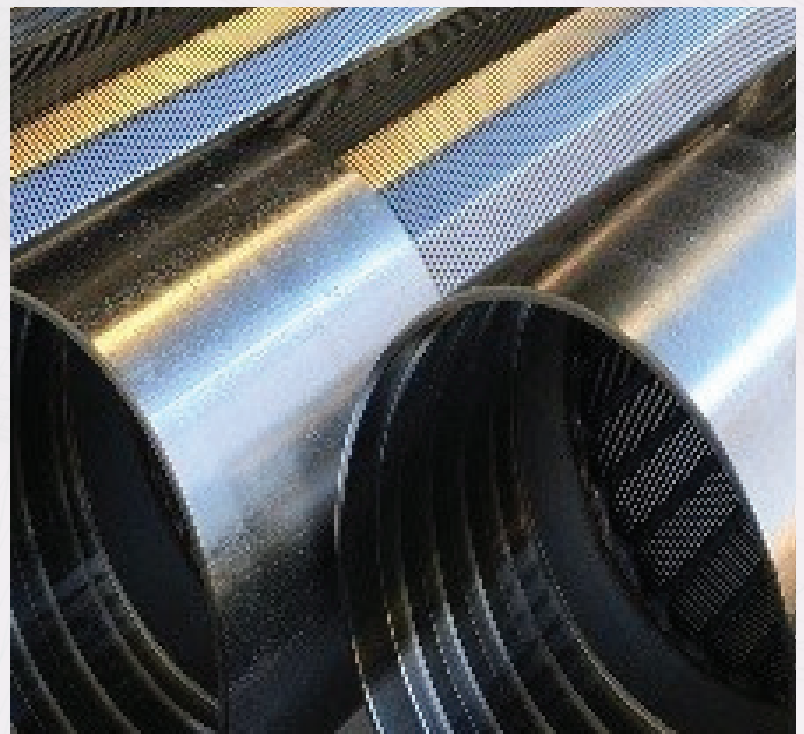
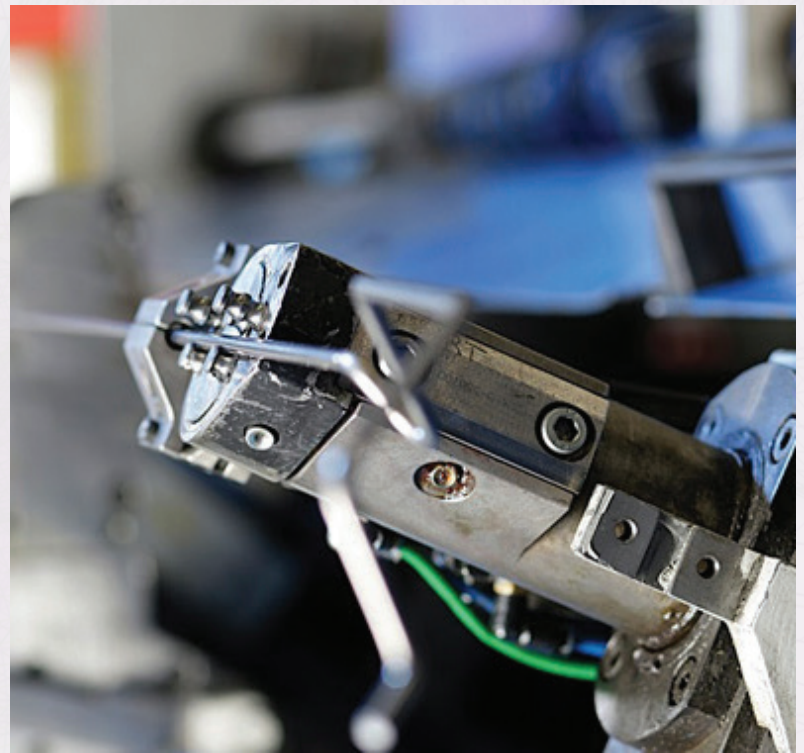
Dia. (Inch)	T/S (ksi)
0.016 - 0.063	164 - 213

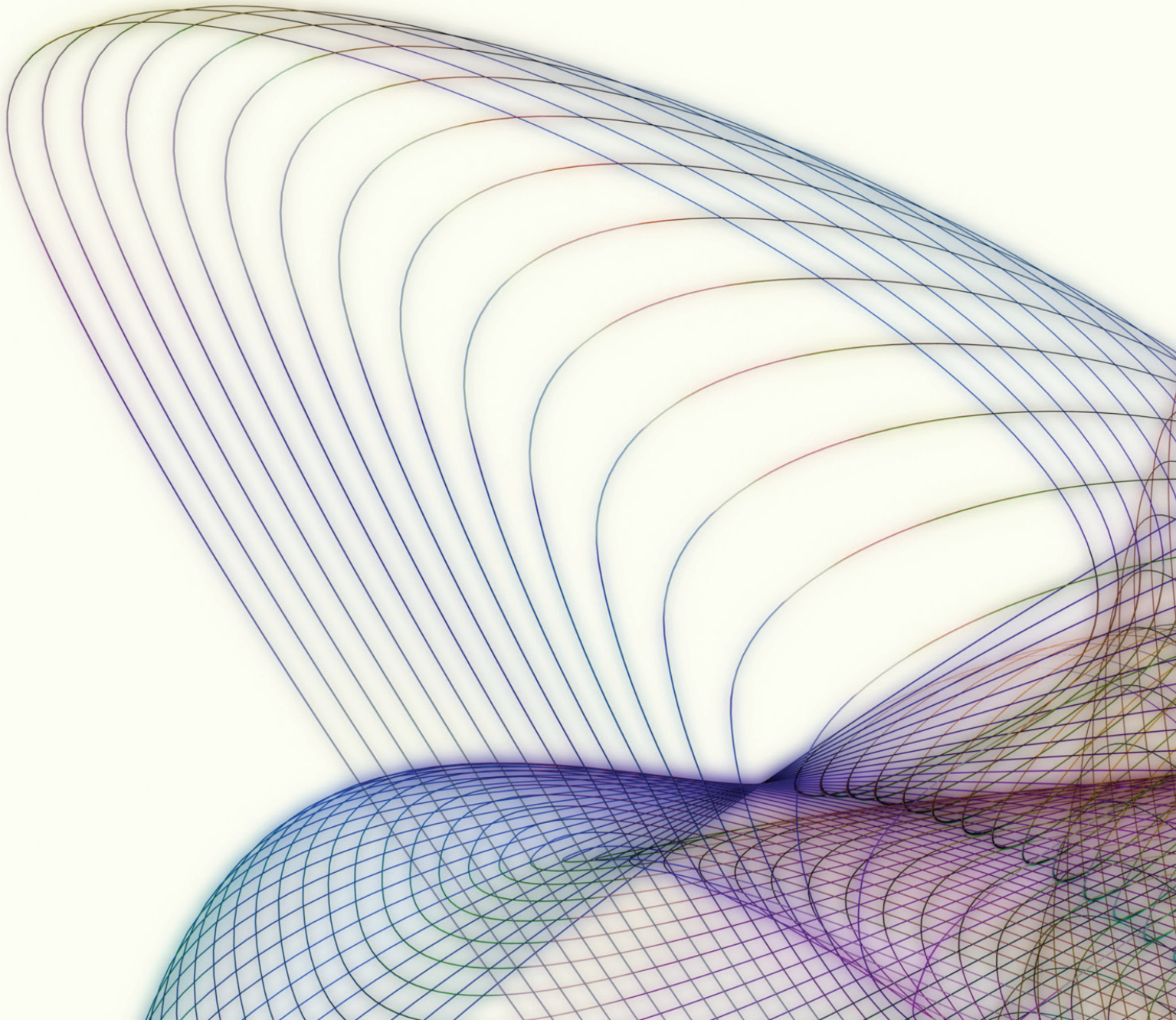
**3/4 HARD**

Dia. (Inch)	T/S (ksi)
0.016 - 0.063	232 - 268
0.024 - 0.039	222 - 258
0.040 - 0.055	210 - 247
0.056 - 0.079	203 - 239
0.080 - 0.102	191 - 228
0.103 - 0.126	178 - 215

**FULL HARD**

Dia. (Inch)	T/S (ksi)
0.016	297 - 334
0.017 - 0.024	283 - 319
0.025 - 0.039	268 - 305
0.040 - 0.055	254 - 290
0.056 - 0.079	239 - 276
0.080 - 0.102	225 - 261
0.103 - 0.118	210 - 247





**KSW**

Korea Steel Wire

High Carbon Music Spring Wire  
Stainless Steel Spring Wire

[www.sjhanscorp.com](http://www.sjhanscorp.com)

| [www.shwire.com](http://www.shwire.com)

SH Wire | S&J Hans Corp.

425 Broadhollow Rd.  
Suite# 218  
Melville, New York 11747

Tel: 631-396-0500  
Fax: 631-396-0504

Factory

27 Hasinbeonyeong-ro,  
Saha-gu, Busan, Korea

[www.sjhanscorp.com](http://www.sjhanscorp.com)  
[www.shwire.com](http://www.shwire.com)



S&J HANS  
SH WIRE