



DONG-IL STEEL

Starting a creative revolution
for a better future



www.dongil-steel.com

WE BUILD A BRIGHTER FUTURE

불꽃 같은 열정으로 새로운 선재 전문기업의 리더를 목표로 한 걸음씩 나아가고 있습니다.

We are making a step forward to be the best leading steel wire company.



Our work is to find energy sources for the future.

CEO Greeting

Since founded in 1959, we, DONGIL-STEEL MFG. CO., LTD. have been committed to becoming the best steel wire company. Our main products are PC wire, PC strand, hard drawn steel wire, piano wire, galvanized steel wire and cold drawn steel bar. In 1997, we moved in the new factory with state-of-the-art facilities in Anseong-si, Gyeonggi-do. We've been exporting to more than 30 countries such as USA, Japan, China and our products are world-widely recognized for their outstanding quality under the perfect quality control system and technology accumulated. Through continuous technology innovation, quality improvement and management innovation, we will be dedicated to rewarding all of our customers. Thank you.

동일제강(주)은 1959년 창립하여 지난 50여 년간 선재사업을 통하여 성장 발전하여 온 선재 전문기업입니다. 동일제강의 주 생산품은 PC강선 및 강연선, 경강선, PIANO선, 아연도강선, 마봉강 등 입니다. 1997년 경기도 안성에 최첨단 시설을 갖춘 대단위 공장을 완공하여 이전하였고, 엄격한 품질관리와 오랜 경험으로 쌓은 기술력으로 품질의 우수성을 인정받아 미국, 일본 등 세계 30여 개국에 수출을 하고 있습니다. 동일제강(주)은 끊임없는 기술혁신, 품질향상, 경영혁신을 통하여 고객 여러분의 성원에 보답하는 초우량 기업이 되겠습니다. 감사합니다.

대표이사_CEO
김익중(KIM, IKJOONG)

CONTENTS

- | | |
|--------------------------------|---------------------------------------|
| 02 ABOUT US | 18 HARD DRAWN STEEL WIRE / PIANO WIRE |
| 04 BRIEF HISTORY | 22 GALV'D STEEL WIRE & STRAND |
| 06 INTRODUCTION | 28 COLD DRAWN STEEL BAR |
| 08 BUSINESS AREA | 34 Quality Assurance |
| 10 LOW P.C. WIRE & P.C. STRAND | 35 Certificates |

HISTORY

1959 ~ 1983

- 1959. 07. Established as DONG-IL STEEL CO., LTD.
(Guro-Dong, Guro-Gu, Seoul)
동일제강 주식회사 설립 (서울시 구로구 구로동)
- 1970. 11. Obtained K.S certification
(PC steel wire and PC strand)
KS 표시 인증 (PC 강선 및 강연선)
- 1974. 03. Obtained K.S certification (Hard Drawn Steel wire)
KS 표시 인증 (경강선)
- 1982. 11. Awarded industrial prize on the Day of Export
수출의 날 산업포장 수상
- 1983. 02. Obtained K.S certification
(Galvanized steel wire, PC Hard Drawn Steel wire)
KS 표시 인증 (아연도 강연선, PC 경강선)
- 1983. 11. Awarded Coal Industry Medal
석탄산업 훈장 수상

1989 ~ 1999

- 1989. 04. Obtained K.S certification
(CD Bar, Piano wire)
KS 표시 인증 (마봉강, 피아노선)
- 1994. 07. Obtained JIS certification
(Hard Drawn Steel wire, PC steel wire and PC strand)
JIS 표시 인증 (경강선, PC 강선 및 강연선)
- 1995. 09. Acquired ISO 9002
(Netherlands recognition agency, DNV)
ISO 9002 인증 획득 (네덜란드 인정기관 DNV)
- 1997. 01. Relocated to a new factory in Anseong
(Miyang-Myeon, Anseong-Si, Gyeonggi-Do)
안성 신공장 이전 (경기도 안성시 미양면)
- 1999. 02. Increased capital (20 billion won)
자본금 증자 (200억원)

**DONG-IL STEEL starts making a new leap forward.
And will continuously do our best to be the world best
company in the world.**

DONG-IL STEEL은 새로운 도약을 시작합니다.

World Best 기업이라는 꿈과 미래를 향해 끊임없이 전진하겠습니다.

2003 ~ Present

- 2003. 10 ISO 9001 (D.N.V) – Certified
- 2006. 04 Obtained K mark certification (Norway) - PC strand
K 마크 인증 (노르웨이) – PC 강연선
- 2009. 09 Registered as an approved company of Doosan Heavy Industry
(Nuclear energy PC STRAND for CPTS and Tendon production)
두산중공업 승인업체 등록 (원자력 CPTS용 PC-STRAND 및 텐던제작)
- 2009. 09 Obtained new JIS certification
PC steel wire and PC strand - JIS G 3536
신 JIS 마크 인증 – PC 강선 및 강연선 – JIS G 3536
- 2010. 09 Built PE coating line
PE 코팅 라인 도입
- 2011. 08 Built additional annealing heat treatment
소둔 열처리로 증설
- 2011. 08 Built additional D/B (Draw Bench) line
D/B (Draw Bench) 라인 증설
- 2014. 06 Cold drawn steel line expansion in Pohang Factory
포항공장 마봉강라인 증설

경영이념 [Management Philosophy]

We are continuing to put on every effort into making a happy life together.
더불어 사는 행복한 삶을 향한 동일제강의 노력은 지금도 계속되고 있습니다.

Human resources first
인재제일

Key value
핵심가치

Best orientation
최고지향

Change and innovation
변화혁신

Righteousness management
정도경영

DONG-IL STEEL

is one of the leading steel companies in Korea.

1959년 7월 설립된 동일제강은 1997년 1월 경기도 안성 미양 제2산업 단지내 20,000여평의 대지에 최신, 최첨단 설비를 갖춘 대단위 선재종합공장을 완공함으로써 대도약의 획기적 전기를 맞이하였습니다.

연간 선재 2차 제품 생산능력이 120,000톤에 이르는 동일제강은 주력제품으로 Low P.C. 강선 및 강연선, Piano Wire를 포함한 경강선류, 아연도 강선 및 강연선, 마봉강을 생산하며 그 품질은 이미 국내외에 우수성을 인정받고 있으며 지금도 쉬지 않고 기술개발과 최고제품 생산에 전사적으로 심혈을 기울이고 있습니다.

동일은 오로지 철저한 프로정신, 장인정신으로 무장하여 품질 제일주의, 고객 지상주의의 대원칙에 따라 항상 고객의 곁을 지키며 아울러 국내외 동종업계의 선두기업이 될 것을 다짐하는 바입니다.



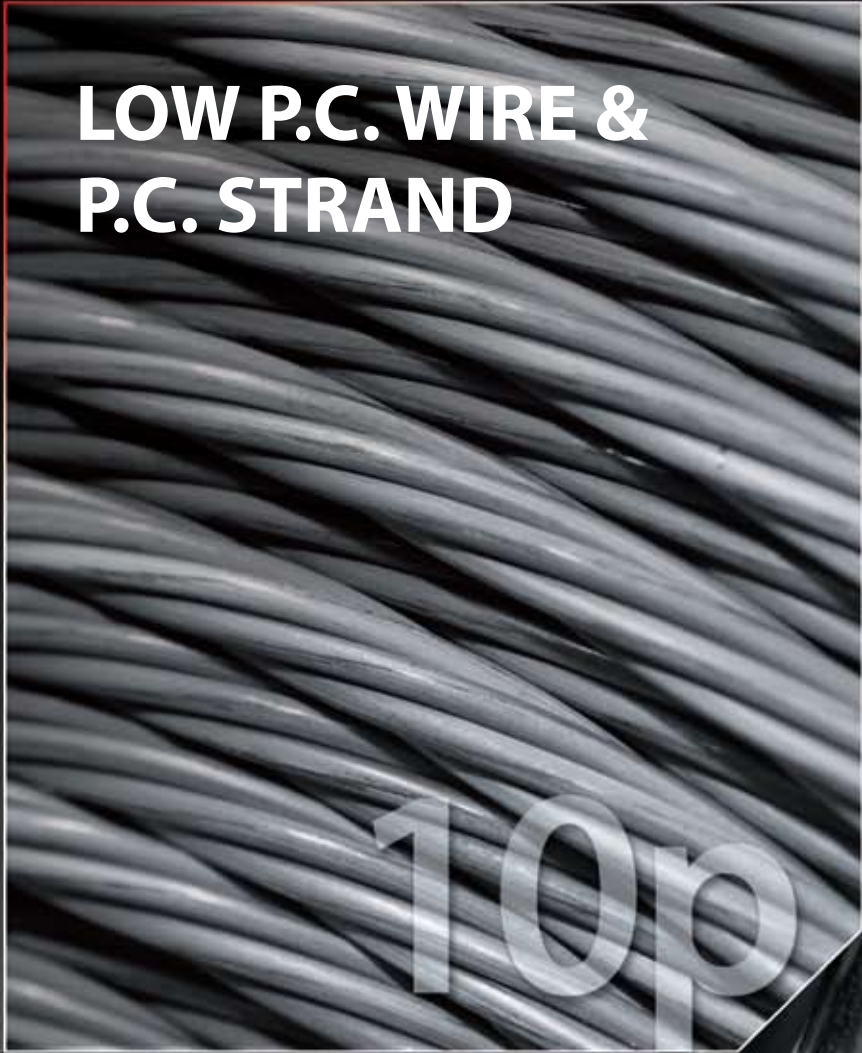
We're the specialist in the production of High Carbon Steel Wire products.

The most modern production facilities and constant control over every stage of manufacture are combined to convert the finest raw materials into steel wire of the unsurpassed quality which DONG-IL is famous for. Quality and Service are the mottos of DONG-IL STEEL. Qualified engineers and other well-trained specialists with long experiences assure the uniformity and excellent workmanship of all our wire products. Our products are approved by the Korean Industrial Standards (KS) and fully meet all the requirements of international specification such as Japanese Industrial Standards (JIS) and International Standardization Organization (ISO). And service always comes first. All orders, both large and small, are given careful and prompt attention. DONG-IL STEEL has a full line of steel wire products to meet your needs.



BUSINESS OVERVIEW

Committed to making life better and more beautiful,
we are devoting all our energies to make the world better.



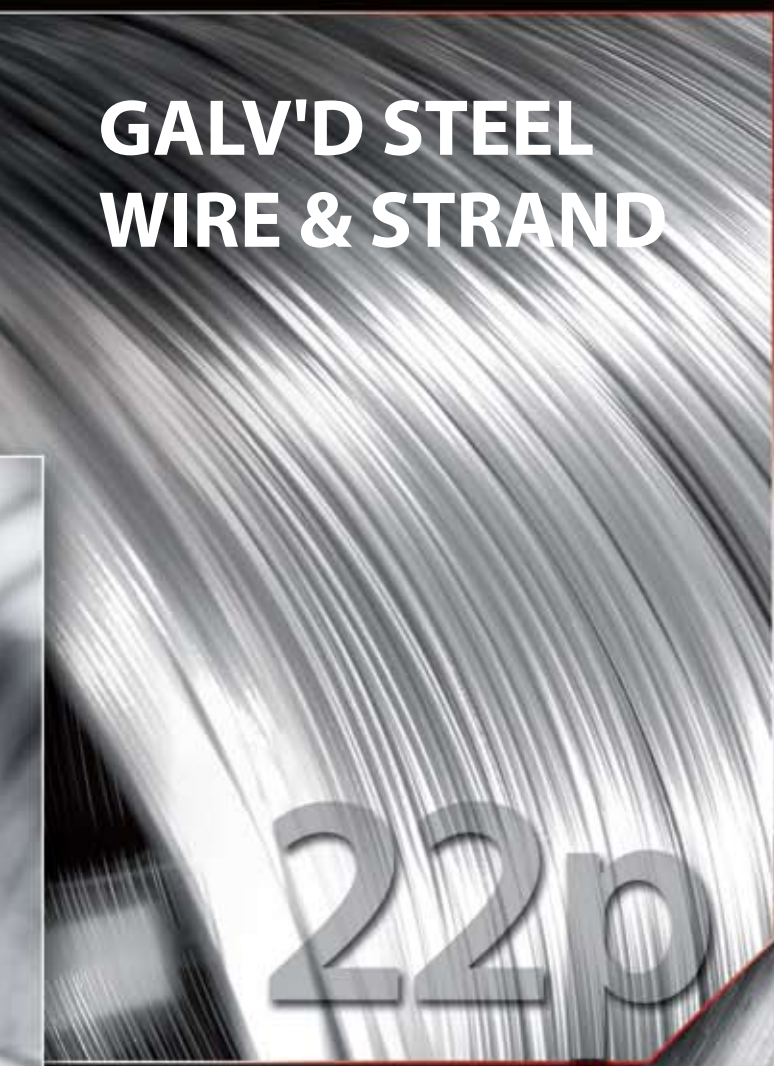
**LOW P.C. WIRE &
P.C. STRAND**

10p



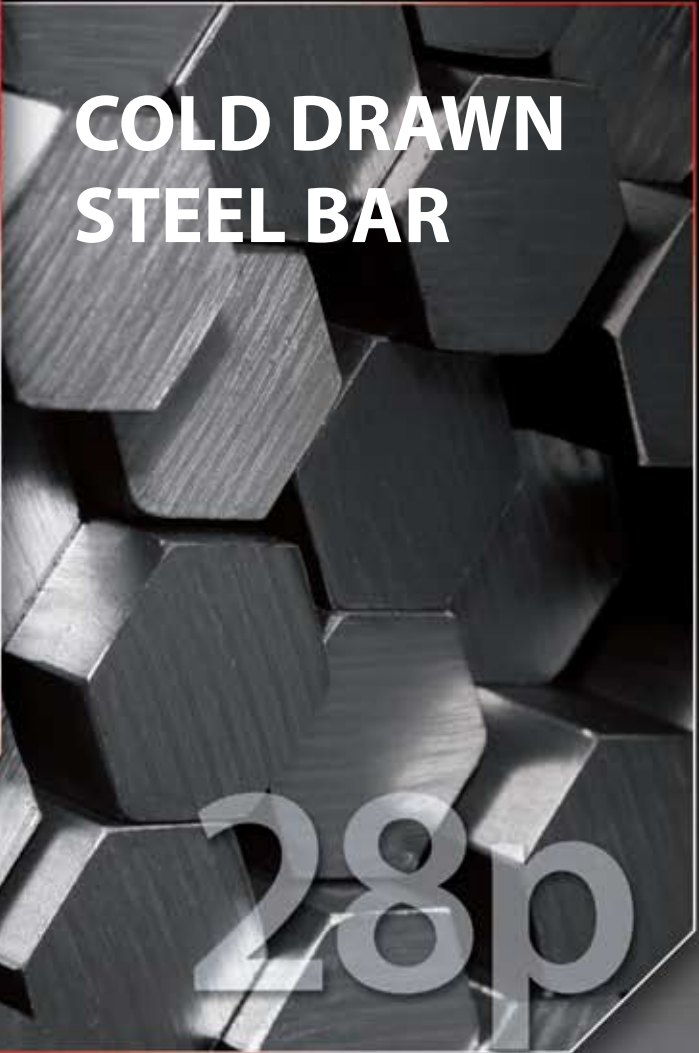
**HARD DRAWN
STEEL WIRE /
PIANO WIRE**

18p



**GALV'D STEEL
WIRE & STRAND**

22p



**COLD DRAWN
STEEL BAR**

28p

DONG-IL STEEL

Starting a creative revolution for a better future

LOW P.C. WIRE & P.C. STRAND



LOW P.C. WIRE & P.C. STRAND

DONG-IL STEEL's Low P.C. Wire and strand have pioneered the nation's SOC Projects for the construction of high speed railroads, bridges, railroad sleepers, atomic furnaces, harbors and airports. Our high-quality PC products are well-known to the domestic and overseas customers, thus meeting with their needs to full satisfaction. DONG-IL STEEL's new Anseong mill is equipped with brand-new and sophisticated excellent PC Wire and Strand facilities. Through such consistent production system and perfect Quality Assurance, we follow up our full warranty service for all of our customers that makes DONG-IL STEEL the NO.1 producer in Korea. Furthermore, we are also proud of the largest 60" cable in Asia that manufactures the big size P.C. Cable. DONG-IL STEEL's P.C. Cable is mainly used for construction works at the jobsite relating to breakwater, retaining walls, and the ground base of port, waterway and dam.

고속철도, 교량 침목, 원자로, 항만, 공항건설용등의 국가SOC사업 추진에 선도적 역할을 해온 동일제강의 Low P.C.강선 및 강연선은 그 품질과 명성이 이미 국내시장은 물론 해외시장에서도 널리 알려져 있어 많은 수요가들의 만족에 부응하고 있습니다. 특히 안성 공장의 Low P.C. Line은 국내 최대의 종합 P.C.제품 Maker로서의 입지를 공고히 하게 되었으며, 이로써 P.C.류 제품의 일관생산 및 공급체계를 갖추고 완벽한 품질시스템에 의한 품질검증과 치밀한 추적성 관리를 통해 최고의 제품을 국내외 수요가들에게 공급해 드리고 있습니다.

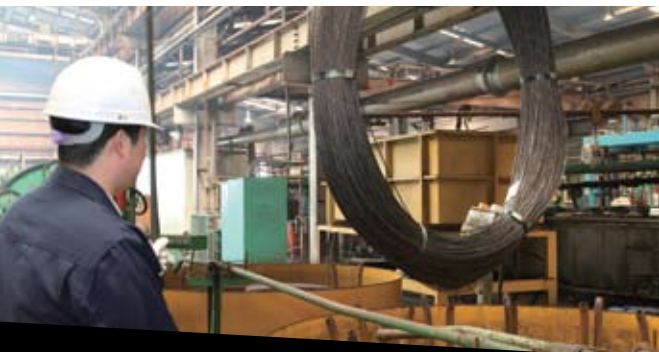
아울러 동일이 보유하고 있는 동양 최대의 60" Cable은 항만, 수로 댐 건설의 지반부력 방지용과, 방파제 물막이용 대형 콘크리트 돌고리 및 토목공사옹벽의 사면앵커등에 널리 사용되고 있습니다.

LOW RELAXATION P.C. STRAND

LOW P.C. STRAND

	Standard		Nominal Diameter		Tolerance of Dia.		Unit
		Grade	in	mm	in	mm	lbs/1000ft
7WIRE STRAND	ASTM A 416	250	1/4	6.4	±0.016	±0.40	122
			5/16	7.9	±0.016	±0.40	197
			3/8	9.5	±0.016	±0.40	272
			7/16	11.1	±0.016	±0.40	367
			1/2	12.7	±0.016	±0.40	490
			0.6	15.2	±0.016	±0.40	737
		270	3/8	9.53	+0.026 / -0.006	+0.66 / -0.15	290
			7/16	11.11	+0.026 / -0.006	+0.66 / -0.15	390
			1/2	12.70	+0.026 / -0.006	+0.66 / -0.15	520
			0.6	15.24	+0.026 / -0.006	+0.66 / -0.15	740
	BS 5896	STANDARD	3/8	9.3	+0.012 / -0.006	+0.3 / -0.15	274
			7/16	11.0	+0.012 / -0.006	+0.3 / -0.15	374
			1/2	12.5	+0.012 / -0.008	+0.4 / -0.2	490
			0.6	15.2	+0.012 / -0.008	+0.4 / -0.2	732
		SUPER	5/16	8.0	+0.012 / -0.006	+0.3 / -0.15	200
			3/8	9.6	+0.012 / -0.006	+0.3 / -0.15	290
			7/16	11.3	+0.012 / -0.006	+0.3 / -0.15	396
			1/2	12.9	+0.012 / -0.008	+0.4 / -0.2	527
			0.6	15.7	+0.012 / -0.008	+0.4 / -0.2	792
	KS D-7002 & JIS G3536	SWPC 7A or SWPR 7AL	1/4	6.2	+0.016 / -0.008	+0.4 / -0.2	122
			5/16	7.9	+0.016 / -0.008	+0.4 / -0.2	196
			3/8	9.3	+0.016 / -0.008	+0.4 / -0.2	272
			7/16	10.8	+0.016 / -0.008	+0.4 / -0.2	366
			1/2	12.4	+0.016 / -0.008	+0.4 / -0.2	489
			0.6	15.2	+0.016 / -0.008	+0.4 / -0.2	739
		SWPC 7B or SWPR 7BL	3/8	9.5	+0.016 / -0.008	+0.4 / -0.2	290
			7/16	11.1	+0.016 / -0.008	+0.4 / -0.2	389
			1/2	12.7	+0.016 / -0.008	+0.4 / -0.2	520
			0.6	15.2	+0.016 / -0.008	+0.4 / -0.2	739
2-WIRE STRAND	KS D-7002 & JIS G3536	SWPC 2 SWPR 2L	—	2.9×2	±0.001	±0.03	69.8
3-WIRE STRAND	KS D-7002 & JIS G3536	SWPD 3& SWPD 3L	—	2.9×2	±0.001	±0.03	104.8
			—	3.0×2	±0.001	±0.03	112.7

※공칭 단면적 및 단위 무게는 선경에 따라 차이 날 수 있음.





Weight	Breaking Load (Min)		Yield Load (Min)		Elongation %(Min)	Pitch	Relaxation
kg/km	1bf	KN	1bf	KN			
182	9,000	40.0	8,100	36.0	3.5	12-16D	Max. 2.5% Per 1000 Hr (B.L*×0.70)
294	14,500	64.5	13,050	58.1	3.5	12-16D	
405	20,000	89.0	18,000	80.1	3.5	12-16D	
548	27,000	120.1	24,300	108.1	3.5	12-16D	
730	36,000	160.1	32,400	144.1	3.5	12-16D	
1,094	54,000	240.2	48,600	216.2	3.5	12-16D	
432	23,000	102.3	20,700	92.1	3.5	12-16D	
582	31,000	137.9	27,900	124.1	3.5	12-16D	
775	41,300	183.7	37,170	165.3	3.5	12-16D	
1,102	58,600	260.7	52,740	234.6	3.5	12-16D	
408	20,680	92	18,210	81	3.5	12-18D	Max. 2.5% Per 1000 Hr (B.L*×0.70)
557	28,100	125	24,730	110	3.5	12-18D	
730	36,870	164	32,370	144	3.5	12-18D	
1,090	52,150	232	45,860	204	3.5	12-18D	
298	15,730	70	13,710	61	3.5	12-18D	
432	22,930	102	20,230	90	3.5	12-18D	
590	31,250	139	27,420	122	3.5	12-18D	
785	41,810	186	36,640	163	3.5	12-18D	
1,180	59,570	265	52,380	233	3.5	12-18D	
182	9,040	40.2	7,600	33.8	3.5	12-18D	Max. 2.5% Per 1000 Hr (B.L*×0.7)
293	14,550	64.7	12,340	54.9	3.5	12-18D	
405	19,950	88.8	16,970	75.5	3.5	12-18D	
546	26,890	120	22,930	102	3.5	12-18D	
729	35,930	160	30,640	136	3.5	12-18D	
1,101	54,010	240	45,850	204	3.5	12-18D	
432	22,930	102	19,510	86.8	3.5	12-18D	
580	31,080	138	26,450	118	3.5	12-18D	
774	41,220	183	35,050	156	3.5	12-18D	
1,101	58,640	261	49,820	222	3.5	12-18D	
104	5,730	25.5	5,070	22.6	3.5	24-32D	Max. 2.5% Per 1000 Hr (B.L*×0.7)
156	8,600	38.2	7,600	33.8	3.5	24-32D	
168	8,600	38.2	7,600	33.8	3.5	24-32D	

1KN = 1,000N

1N = 1÷9.8kgf = 0.102kgf

ex. 183KN = 183 ÷ 9.8 × 1,000kgf = 18,673kgf

* B.L : Breaking Load



LOW RELAXATION P.C. STRAND



LOW P.C. WIRE

SINGLE WIRE	Standard		Nominal Diameter		Tolerance of Dia.		Unit	Weight	Breaking Load (Min)		Yield Load (Min)		Elongation % (Min)	Relaxation
	Grade		in	mm	in	mm	lbs/1000ft	kg/km	1bf	KN	1bf	KN		
ASTM A 421	Type WA		0.192	4.88	±0.002	±0.050	–	–	7,250	32.2	6,150	27.3	4.0	2.5% Max per 1000 Hr (B.L*×0.70)
			0.196	4.98	±0.002	±0.050	–	–	7,540	33.5	6,420	28.5	4.0	
			0.250	6.35	±0.002	±0.050	–	–	11,770	52.3	10,010	44.5	4.0	
			0.276	7.01	±0.002	±0.050	–	–	14,050	62.4	11,950	53.1	4.0	
	Type BA		0.196	4.98	±0.002	±0.050	–	–	7,540	33.5	6,420	28.5	4.0	
			0.250	6.35	±0.002	±0.050	–	–	11,770	52.3	10,010	44.5	4.0	
			0.276	7.01	±0.002	±0.050	–	–	14,050	62.4	11,950	53.1	4.0	
B.S 5896	1670N/mm ²		0.157	4	±0.0016	±0.040	66.4	98.9	4,720	21.0	4,030	17.9	3.5	2.5% Max per 1000 Hr (B.L*×0.70)
	1620N/mm ²		0.177	4.5	±0.002	±0.050	84	125	5,800	25.8	4,920	21.9	3.5	
	1670N/mm ²		0.197	5	±0.002	±0.050	103	154	7,360	32.7	6,240	21.8	3.5	
	1670N/mm ²		0.236	6	±0.002	±0.050	149	222	10,640	47.3	9,040	40.2	3.5	
	1570N/mm ²		0.276	7	±0.002	±0.050	203	302	13,580	60.4	11,540	51.3	3.5	
KSD 7002 & JIS G3536	SWPC 1 or SWPR 1AL		0.114	2.9	±0.001	±0.030	34.8	51.8	2,860	12.7	2,530	11.3	3.5	2.5% Max per 1000 Hr (B.L*×0.70)
			0.138	3.5	±0.0015	±0.040	50.7	75.5	3,630	16.2	3,190	14.2	3.5	
			0.157	4	±0.0015	±0.040	66.3	98.7	4,740	21.1	4,190	18.6	3.5	
			0.177	4.5	±0.002	±0.050	84	125	5,730	25.5	5,070	22.6	4.0	
	SWPD 1 or SWPD 1L		0.197	5	±0.002	±0.050	103	154	7,160	31.9	6,280	27.9	4.0	
			0.236	6	±0.002	±0.050	149	222	9,920	44.1	8,700	38.7	4.0	
			0.276	7	±0.002	±0.050	203	302	13,110	58.3	11,460	51.0	4.5	
			0.315	8	±0.0024	±0.060	265	395	16,640	74.0	14,440	64.2	4.5	
			0.354	9	±0.0024	±0.060	335	499	20,280	90.2	17,520	78.0	4.5	

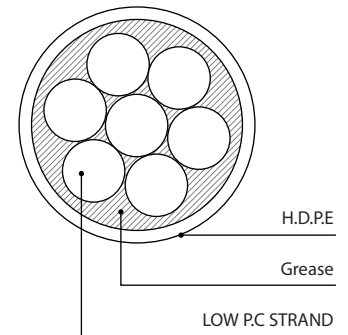
* B.L : Breaking Load

GALVANIZED LOW P.C. STRAND

GALVANIZED 7WIRE STRAND	Standard		Nominal Diameter		Tolerance of Dia.		Unit
	Grade		in	mm	in	mm	lbs/1000ft
ASTM A416	270		1/2	12.7	+0.026 / –0.006	+0.66 / –0.15	520
			0.6	15.2	+0.026 / –0.006	+0.66 / –0.15	740
BS 5896	SUPER		1/2	12.7	+0.016 / –0.008	+0.4 / –0.2	527
			0.6	15.2	+0.016 / –0.008	+0.4 / –0.2	792
KS D 7002 JIS G 3536	SWPC 7BL SWPR 7BL		1/2	12.7	+0.016 / –0.008	+0.4 / –0.2	520
			0.6	15.2	+0.016 / –0.008	+0.4 / –0.2	739

UNBONDED P.C. STRAND & P.C. CABLE

LOW P.C. STRAND	UNBONDED P.C. STRAND(BUYER SPEC)			
Standard	Nominal Diameter	Nominal Diameter	H.D.PE Thickness	Grease Coating Weight
	(mm)	(mm)	(mm)	(g/m)
KS D 7002	12.7	15.7~16.5	1.00~1.25	Min 35
	15.2	18.5~18.7	1.25~1.50	Min 45
ASTM A 416	12.7	15.7~16.5	1.00~1.25	Min 35
	15.24	18.5~18.7	1.25~1.50	Min 45
BS 5896	15.7	18.7~18.9	1.25~1.50	Min 30



※ H.D.P.E THICKNESS AND OUT DIAMETER OF UNBONDED P.C. STRAND TO BE AGREEABLE.

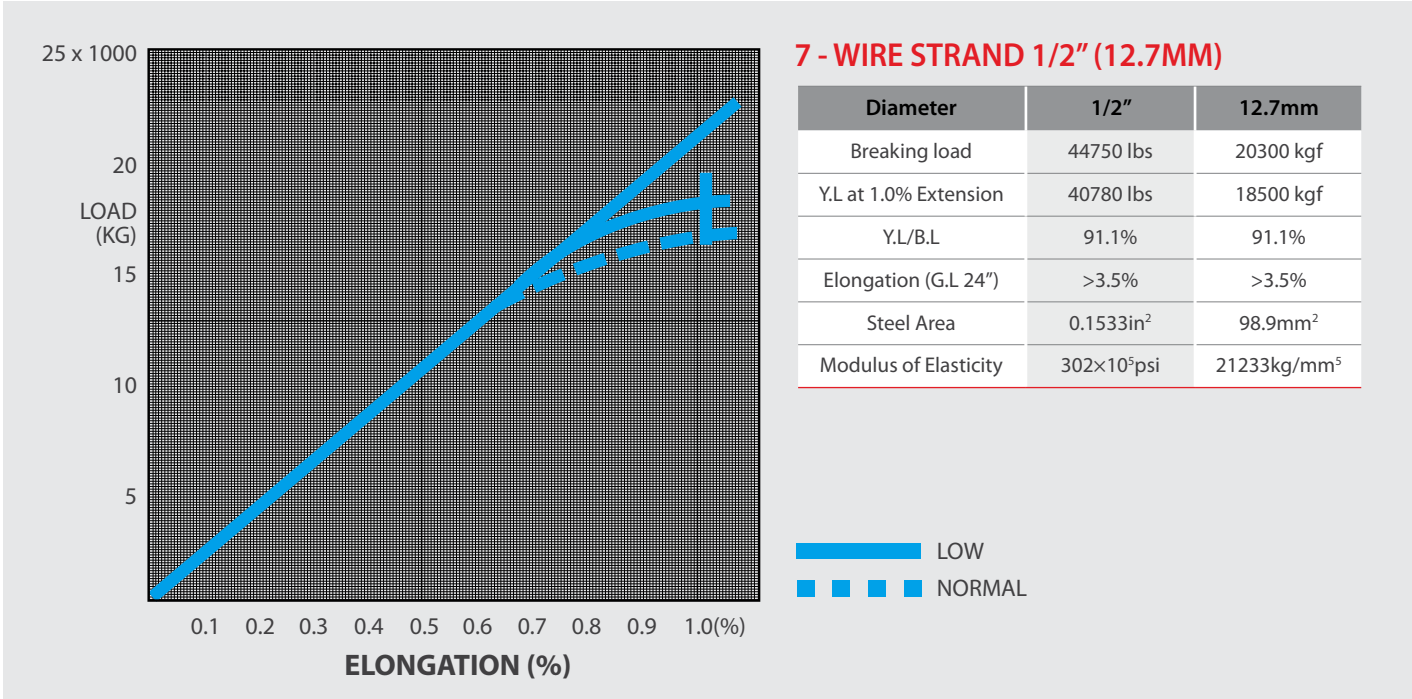
P.C. Cable

Item \ Unit		Type	F30T	F50T	F70T	F100T	F130T	F160T	F200T	F270T
Steel Strand			1×ø17.8	7×ø8.1	7×ø9.5	7×ø11.1	7×ø12.7	7×ø15.2	19×ø9.5	19×ø11.1
Nominal Diameter		mm	17.8	24.3	28.5	33.3	38.1	45.6	47.5	55.5
Section Area		mm ²	191.1	277.1	383.9	519.3	691.0	970.9	1,042.0	1,409.6
Weights(Steel Strand)		kg/m	1.53	2.19	3.04	4.09	5.45	7.75	8.77	11.78
Weight		kg/m	1.85	2.68	3.65	4.92	6.54	9.82	10.47	14.10
Breaking Load		†	33.6	49.0	70.0	95.0	126.0	155.6	190.5	258.5
Yield Point Load		†	28.5	43.2	61.5	83.3	110.4	136.8	166.9	226.2
Allowable Tensile Load	Normal	†	11.4	17.3	24.6	33.3	44.2	54.7	66.8	90.5
	Earthquake	†	17.1	25.9	36.9	50.0	66.2	82.0	100.1	135.7
Cross Section		mm	17.8 	24.3 	28.5 	33.3 	38.1 	45.6 	47.5 	55.5

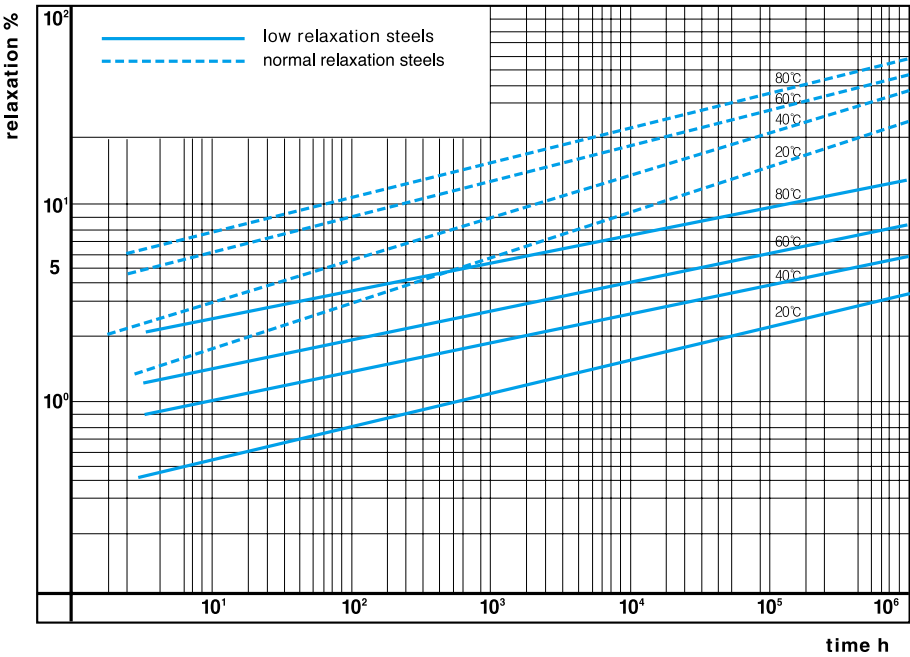
Weight kg/km	Breaking Load (Min)		Yield Load (Min)		Elongation %(Min)	Pitch	Relaxation
	1bf	KN	1bf	KN			
775	41,300	183.7	37,170	165.3	3.5	12-16D	Max. 2.5% Per 1000 Hr (B.L.*x0.7)
1,102	58,600	260.7	52,740	234.6	3.5	12-16D	
785	41,810	186	36,640	163	3.5	12-18D	Max. 2.5% Per 1000 Hr (B.L.*x0.7)
1,180	59,570	265	52,380	233	3.5	12-18D	
774	41,220	183	35,050	156	3.5	12-18D	Max. 2.5% Per 1000 Hr (B.L.*x0.7)
1,101	59,640	261	49,820	222	3.5	12-18D	

LOW RELAXATION P.C. STRAND

STRESS-STRAIN CURVE



RELAXATION CURVE



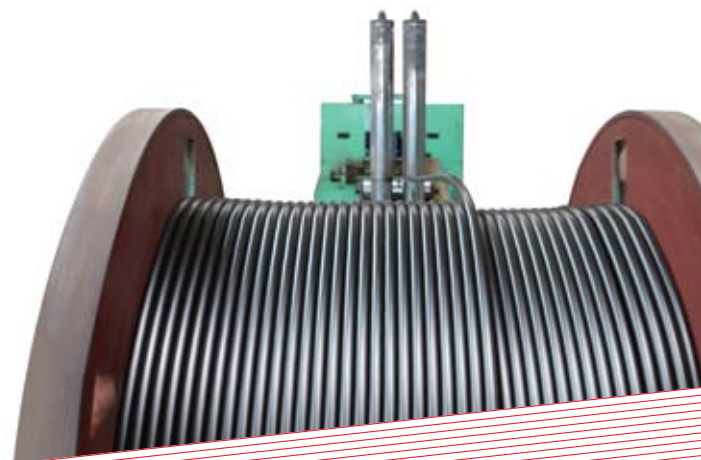
STANDARD PACKING

PRODUCT	PACKING STYLE	SIZE		INSIDE DIA. APPROX.		WIDTH APPROX.		OUTSIDE DIA. APPROX.		WEIGHT PER REEL or COIL APPROX.	
		in	mm	in	mm	in	mm	in	mm	LBS	Kg
Single Wire	Coil	0.157	4.0	61.4±5	1560±100	11.8	300	81.1±5	2050±100	Min 661.4	Min 300
		0.197	5.0								
		0.236	6.0								
		0.276	7.0	61.4±5	1560±100	11.8	300	81.1±5	2050±100	Min 661.4	Min 300
		0.315	8.0								
		0.354	9.0								
2 or 3-Wire Strand	Coil	—	2×2.9	61.4±5	1560±100	11.8	300	81.1±5	2050±100	Min 661.4	Min 300
		—	3×2.9								
		—	1/4(1×3)								
7-Wire Strand	Reelless	1/4	6.2	31.5	800	29.5	750	47.2	1200	4409±220	2000±100
		3/8	9.5								
		7/16	11.1								
		1/2	12.5	31.5	800	29.5	750	51.2	1300	6393±100	2900±100
		1/2	12.7								
		0.6	15.2								
		0.6	15.7								

DONG-IL STEEL'S P.C. Wire and Strand Products are characterized by their perfect Low Relaxation Assurance, suitable Yield Ratio, stable Elongation, good Straightness and fine Surface that are technically verified through the 1,000-hour Relaxation Test and Periodical Test conducted by experienced engineers.

The acquisition of KS/JIS/ISO approvals tell the high level of our products.

동일제강의 P.C 강연선 제품들의 특징으로는 완벽한 Low 릴랙세이션 보증, 적절한 항복비, 안정적인 신장, 훌륭한 직진도, 숙련된 엔지니어들에 의해 실시된 1000시간의 릴랙세이션 테스트 및 주기적인 테스트를 통해 기술적으로 검증된 미세한 표면에 있습니다. KS/JIS/ISO 승인의 획득은 우리 제품의 높은 수준을 보증합니다.



HARD DRAWN STEEL WIRE / PIANO WIRE



HARD DRAWN STEEL WIRE / PIANO WIRE

DONG-IL STEEL's Hard Drawn Steel Wire and Piano Wire are made from top-quality high carbon wire rod and piano wire rod as raw material which has 0.40%~0.96% of carbon contents. And each product has 930N/mm² to 2,700N/mm² with high grade of tensile strength ranges after passing through patenting heat treatment process which is for high toughness and consistent tensile strength.

Our Hard Drawn Steel Wire and Piano Wire are mainly used for making precision spring products that require heavy load and numerous repetition.

Especially, 'Gold', the unique brand of DONG-IL, is superior spring piano wire and 'Silver' for ultra-intense hard drawn steel wire with excellent quality which were developed by DONG-IL for the first time in Korea.

동일제강에서 생산하는 경강선과 Piano선은 탄소성분이 0.40% ~ 0.96% 함량을 가진 경강선재 및 피아노선재를 원료재로 사용하여 균일한 인장강도, 고인성을 충족하기 위해 Patenting 열처리과정을 거친 후 신선한 선재로서, 선경에 따른 제품의 인장강도는 930 N/mm² ~ 2,700 N/mm² Grade의 고인장력을 보유함으로써 반복 횟수가 아주 많으면서도 높은 하중이 요구되는 정밀 스프링용의 소재로서 주로 사용되고 있습니다.

특히 동일제강 기술진의 독자적인 기술력에 의해 개발된 고유 Brand인 고급 스프링용 피아노선 "GOLD"와 고강도 경강선 "SILVER"는 국내 최초로 개발된 고품질 선재로서 국내 및 해외 수요가들에 의해 널리 애용되고 있는 제품입니다.

HARD DRAWN STEEL WIRE / PIANO WIRE

NOMINAL DIAMETER	HARD DRAWN STEEL WIRE			PIANO WIRE (GOLD)		SILVER
	TENSILE STRENGTH, N/mm ² (Kgf/mm ²)			TENSILE STRENGTH, N/mm ² (Kgf/mm ²)		
	SW-A	SW-B	SW-C	GOLD-A PIANO WIRE A-GRADE	GOLD-B PIANO WIRE B-GRADE	
0.60	1570-1810(160-185)	1810-2110(185-215)	2110-2400(215-245)	2210-2450(225-250)	2450-2700(250-275)	2400-2650(245-270)
0.65	1570-1810(160-185)	1810-2110(185-215)	2110-2400(215-245)	2210-2450(225-250)	2450-2700(250-275)	2400-2650(245-270)
0.70	1520-1770(155-180)	1770-2060(180-210)	2060-2350(210-240)	2160-2400(220-245)	2400-2650(245-270)	2350-2600(240-265)
0.80	1520-1770(155-180)	1770-2060(180-210)	2010-2300(205-235)	2110-2350(215-240)	2350-2600(240-265)	2350-2600(240-260)
0.90	1520-1770(155-180)	1770-2060(180-210)	2010-2260(205-230)	2110-2300(215-235)	2300-2500(235-255)	2260-2450(230-250)
1.00	1470-1720(150-175)	1720-1960(175-200)	1960-2210(200-225)	2060-2260(210-230)	2260-2450(230-250)	2210-2400(225-245)
1.20	1420-1670(145-170)	1670-1910(170-195)	1910-2160(195-220)	2010-2210(205-225)	2210-2400(225-245)	2160-2350(220-240)
1.40	1370-1620(140-165)	1620-1860(165-190)	1860-2110(190-215)	1960-2160(200-220)	2160-2350(220-240)	2110-2300(215-235)
1.60	1320-1570(135-160)	1570-1810(160-185)	1810-2060(185-210)	1910-2110(195-215)	2110-2300(215-235)	2060-2260(210-230)
1.80	1270-1520(130-155)	1520-1770(155-180)	1770-2010(180-205)	1860-2060(190-210)	2060-2260(210-230)	2010-2210(205-225)
2.00	1270-1470(130-150)	1470-1720(150-175)	1720-1960(175-200)	1810-2010(185-205)	2010-2210(205-225)	1960-2160(200-220)
2.30	1230-1420(125-145)	1420-1670(145-170)	1670-1910(170-195)	1770-1960(180-200)	1960-2160(200-220)	1910-2110(195-215)
2.60	1230-1420(125-145)	1420-1670(145-170)	1670-1910(170-195)	1770-1960(180-200)	1960-2160(200-220)	1910-2110(195-215)
2.90	1230-1420(125-145)	1370-1620(140-165)	1620-1860(165-190)	1720-1910(175-195)	1910-2110(195-215)	1860-2060(190-210)
3.20	1180-1370(120-140)	1370-1570(140-160)	1570-1810(160-185)	1670-1860(170-190)	1860-2060(190-210)	1860-2010(185-205)
3.50	1180-1370(120-140)	1370-1570(140-160)	1570-1770(160-180)	1670-1810(170-185)	1810-1960(185-200)	1770-1910(180-195)
4.00	1180-1370(120-140)	1370-1570(140-160)	1570-1770(160-180)	1670-1810(170-185)	1810-1960(185-200)	1770-1910(180-195)
4.50	1130-1320(115-135)	1320-1520(135-155)	1520-1720(155-175)	1620-1770(165-180)	1770-1910(180-195)	1720-1860(175-190)
5.00	1130-1320(115-135)	1320-1520(135-155)	1520-1720(155-175)	1620-1770(165-180)	1770-1910(180-195)	1720-1860(175-190)
5.50	1080-1270(110-130)	1270-1470(130-150)	1470-1670(150-170)	1570-1710(160-175)	1710-1860(175-190)	1670-1810(170-185)
6.00	1030-1230(105-125)	1230-1420(125-145)	1420-1620(145-165)	1520-1670(155-170)	1670-1810(170-185)	1620-1770(165-180)
6.50	1030-1230(105-125)	1230-1420(125-145)	1420-1620(145-165)	1520-1670(155-170)	—	1620-1770(165-180)
7.00	980-1180(100-120)	1180-1370(120-140)	1370-1570(140-160)	1470-1620(150-165)	—	1570-1720(160-175)
8.00	980-1180(100-120)	1180-1370(120-140)	1370-1570(140-160)	1470-1620(150-165)	—	—
9.00	930-1130(95-115)	1130-1320(115-135)	1320-1520(135-155)	—	—	—
10.0	930-1130(95-115)	1130-1320(115-135)	1320-1520(135-155)	—	—	—
11.0	—	1080-1270(110-130)	1270-1470(130-150)	—	—	—
12.0	—	1080-1270(110-130)	1270-1470(130-150)	—	—	—

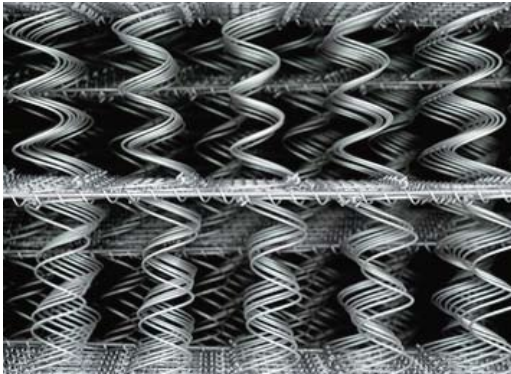
Hard Drawn Steel Wire(KS D3510, JIS G3521), Piano Wire(KS D3556, JIS G3522)





DONG-IL STEEL has the one and only automatic pickling line in Korea that produce high quality and consistent Hard Drawn Steel wire, High-tensile "Silver" wire and Piano wire.

DONG-IL STEEL's unique brand "Silver" and hard drawn steel wire are widely used in variety of industrial field for automatic spring, industrial machine spring, and spring for furniture products such as bed and couch.

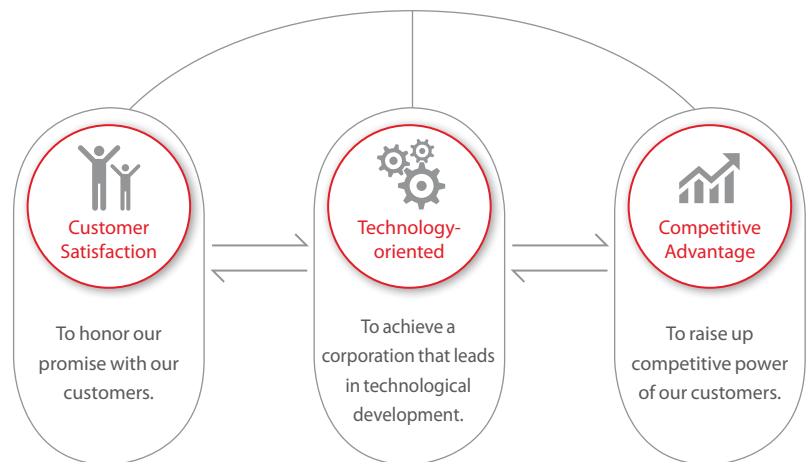


동일제강은 국내유일의 자동산세라인을 보유하고 있으며 고품질의 균일한 제품의 경강선, 고장력강선인 SILVER강선, 피아노선 등을 생산하고 있습니다.

동일제강의 피아노선과 고유브랜드인 SILVER선, 일반 경강선 등은 자동차용 스프링, 금형 등의 산업기계용 스프링, 침대, 소파 등 가구제품용 스프링 등 다양한 산업 분야에 적용되어 사용하고 있습니다.



DONG-IL STEEL



GALV'D STEEL WIRE & STRAND



GALV'D STEEL WIRE & STRAND

DONG-IL's Galvanized Steel Wire and Strand are mainly used for ACSR cable, SS Cable and Messenger Wire.

And the usages of other industrial fields are agricultural greenhouse, zigzag wire and tightening wire.

Our products have outstanding characteristics which include uniformity of coating weight and smooth surface made by modernized ceramic galvanizing furnace, thus enabling the products resist a long period before corrosion.

Especially, DONG-IL's Re-drawing Wire is the high-quality product of its unique technology and long-accumulated knowhow and these features make DONG-IL as a top manufacturer of the nation.

아연도 강선 및 강연선은 주로 전선용 Core(ACSR용) 및 Support Cable(SS-Cable, Messenger wire용)에 널리 사용되며, 기타 용도로 농업용에 적용되는 비닐하우스용 강선, Zig-Zag Wire, 조리개용 강선 등이 있고, 일반 묶음선용 등 관련산업에 여러 분야의 적용 용도를 가지고 있습니다. 아연도 강선 및 강연선은 최신 세라믹 용융 도금로에 의해 생산되어 균일한 부착량과 미려한 표면이 형성되므로 장기간 내식성을 요구하는 제품에 적합합니다.

특히 동일제강의 Re-drawing Wire는 독창적인 기술력과 오래 축적된 Know-how에 의한 고품질의 제품으로 국내 외 시장에서 독보적인 위상을 구축하고 있습니다.

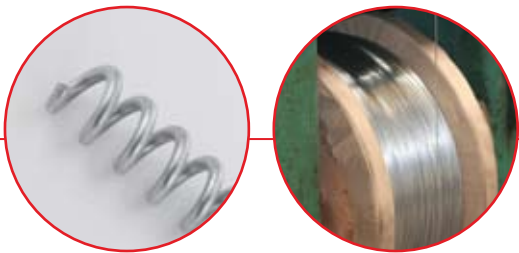


GALV'D STEEL WIRE & STRAND

GALV'D STEEL WIRE

Standard		Nominal Diameter		Tolerance of Diameter		Tensile Strength	
	Grade	mm	inch	mm	inch	kgf/mm ²	Mpa
ASTM B498	Class A	1.270-1.521	0.0500-0.0599	+0.038/-0.025	±0.0015/-0.0010	147.8	1450
		1.524-1.902	0.0600-0.0749	+0.038/-0.025	±0.0015/-0.0010	147.8	1450
		1.905-2.283	0.0750-0.0899	±0.051	±0.002	147.8	1450
		2.286-2.639	0.0900-0.1039	±0.051	±0.002	143.7	1410
		2.642-3.045	0.1040-0.1199	±0.051	±0.002	143.7	1410
		3.048-3.553	0.1200-0.1399	+0.76/-0.051	±0.003/-0.002	143.7	1410
		3.556-4.569	0.1400-0.1799	+0.102/-0.076	±0.004/-0.003	140.7	1380
		4.572-4.822	0.1800-0.1899	+0.102/-0.076	±0.004/-0.003	140.7	1380
BS4565	STANDARD STRENGTH	1.18-2.24	0.0464-0.0881	±2.0%	±2.0%	142.8	1400
		2.24-3.15	0.0881-0.1240	±2.0%	±2.0%	134.7	1320
		3.15-3.80	0.1240-0.1496	±2.0%	±2.0%	134.7	1320
		3.80-5.00	0.1496-0.1968	±2.0%	±2.0%	134.7	1320
	HIGH STRENGTH	1.18-1.32	0.0464-0.0519	±2.0%	±2.0%	158.1	1550
		1.32-2.24	0.0519-0.0881	±2.0%	±2.0%	158.1	1550
		2.24-2.90	0.0881-0.1141	±2.0%	±2.0%	158.1	1550
		2.90-4.00	0.1141-0.1524	±2.0%	±2.0%	158.1	1550
		4.00-5.00	0.1524-0.1968	±2.0%	±2.0%	158.1	1550
DIN 48200	Steel IV	1.35	0.0531	±0.040	±0.0016	160.0	1569
		1.50	0.0590	±0.040	±0.0016	160.0	1569
		1.75	0.0688	±0.040	±0.0016	160.0	1569
		2.25	0.0885	±0.045	±0.0018	160.0	1569
		2.75	0.1082	±0.055	±0.0022	160.0	1569
		3.00	0.1181	±0.060	±0.0024	160.0	1569
		3.50	0.1377	±0.070	±0.0028	160.0	1569
		4.25	0.1673	±0.085	±0.0033	160.0	1569
		4.75	0.1870	±0.095	±0.0037	160.0	1569
JIS C3110 KS C3113		2.3	0.0905	±0.05	±0.0020	135	1324
		2.6	0.1023	±0.05	±0.0020	135	1324
		2.9	0.1141	±0.06	±0.0024	135	1324
		3.1	0.1220	±0.06	±0.0024	130	1275
		3.2	0.1259	±0.06	±0.0024	130	1275
		3.5	0.1377	±0.07	±0.0028	130	1275
		3.8	0.1496	±0.07	±0.0028	130	1275
		4.5	0.1771	±0.09	±0.0035	125	1225





Stress at 1% Extension Min		Elongation	Weight of Zinc Coating	
kgf/mm ²	Mpa	%, Min	oz/ft ²	g/m ²
133.5	1310	3.0 (250mm)	0.60	183
133.5	1310	3.0 (250mm)	0.65	198
133.5	1310	3.0 (250mm)	0.70	214
130.5	1280	3.5 (250mm)	0.75	229
130.5	1280	3.5 (250mm)	0.80	244
126.4	1240	4.0 (250mm)	0.85	259
119.3	1170	4.0 (250mm)	0.90	274
119.3	1170	4.0 (250mm)	1.00	305
120.3	1180	4.0 (200mm)	According to BS 443	According to BS 443
116.2	1140	4.0 (200mm)		
112.2	1100	4.0 (200mm)		
112.2	1100	4.0 (200mm)		
128.5	1260	3.0 (200mm)	According to BS 443	According to BS 443
128.5	1260	3.5 (200mm)		
128.5	1260	3.5 (200mm)		
124.4	1220	4.0 (200mm)		
124.4	1220	4.0 (200mm)	0.59	180
128.0	1255	4.0 (200mm)		
128.0	1255	4.0 (200mm)		
128.0	1255	4.0 (200mm)		
128.0	1255	4.0 (200mm)		
128.0	1255	4.0 (200mm)		
125.0	1255	4.0 (200mm)		
125.0	1255	4.0 (200mm)		
125.0	1255	4.0 (200mm)		
125.0	1255	4.0 (200mm)		
125.0	1255	4.0 (200mm)		
125.0	1255	4.0 (200mm)		
—	—	4.0 (250mm)	0.75	230
—	—	4.0 (250mm)		
—	—	4.0 (250mm)		
—	—	4.5 (250mm)		
—	—	4.5 (250mm)		
—	—	4.5 (250mm)		
—	—	4.5 (250mm)		
—	—	4.5 (250mm)		
—	—	4.5 (250mm)		
—	—	4.5 (250mm)		
—	—	4.5 (250mm)		
—	—	5.0 (250mm)		



GALV'D STEEL WIRE & STRAND

PHYSICAL PROPERTIES OF ZINC-COATED STEEL WIRE STRAND(KS D7007, JIS G3537)

Type No.	Number of Constituent Wires/Preferred Wire Diameter Number	Calculated Outside Diameter of Strand	Calculated Cross Sectional Area of Strand	Tensile Load Steel Wire Strand KN			(Informative Reference) Standard Mass
	mm	mm	mm ²	Grade 1	Grade 2	Grade 3	kg/km
No.2	7/1.00	3.0	5.50	6.19min.	4.48min.	3.47min.	43.5
	7/1.20	3.6	7.92	8.90min.	6.44min.	4.99min.	62.7
	7/1.40	4.2	10.8	12.2min.	8.78min.	6.83min.	85.3
	7/1.60	4.8	14.1	15.9min.	11.5min.	8.90min.	111
	7/1.80	5.4	17.8	20.1min.	14.4min.	11.3min.	141
	7/2.00	6.0	22.0	24.8min.	17.8min.	13.9min.	174
	7/2.30	6.9	29.1	32.8min.	23.6min.	18.3min.	230
	7/2.60	7.8	37.2	42.0min.	30.2min.	23.5min.	294
	7/2.90	8.7	46.2	52.2min.	37.6min.	29.2min.	366
	7/3.20	9.6	56.3	63.7min.	45.7min.	35.6min.	446
	7/3.50	10.5	67.3	75.8min.	54.7min.	42.5min.	533
	7/3.80	11.4	79.3	89.6min.	64.4min.	50.1min.	628
	7/4.00	12.0	88.0	99.1min.	71.4min.	55.6min.	696
	7/4.30	12.9	102	115min.	82.8min.	64.4min.	805
	7/4.50	13.5	111	126min.	90.3min.	70.1min.	881
	7/5.00	15.0	137	155min.	112min.	86.5min.	1090

PHYSICAL PROPERTIES OF ZINC-COATED STEEL WIRE STRAND(ASTM A475)

Nominal Diameter of strand	Number of Wires in Strand	Nominal Diameter Coated Wires in Strand	Approximate Weight of Strand	Minimum Breaking Strength of Strand, lbf (KN)				
				Utilities Grade	Common Grade	Siemens-Martin Grade	High-Strength Grade	Extra High-Strength Grade
1/4(6.35)	3	0.120(3.05)	117(53)	3150(14.012)	1860(8.274)	3040(13.523)	4730(21.040)	6740(29.981)
1/4(6.35)	3	0.120(3.05)	117(53)	4500(20.017)	—	—	—	—
1/4(6.35)	7	0.080(2.03)	121(55)	—	1900(8.452)	3150(14.012)	4750(21.129)	6650(29.581)
9/32(7.14)	3	0.130(3.30)	137(62)	—	2080(9.252)	3380(15.035)	5260(23.398)	7500(33.362)
9/32(7.14)	7	0.093(2.36)	164(74)	4600(20.462)	2570(11.432)	4250(18.905)	6400(28.469)	8950(39.812)
5/16(7.94)	3	0.145(3.68)	171(78)	6500(28.913)	2490(11.076)	4090(18.193)	6350(28.246)	9100(40.479)
5/16(7.94)	7	0.104(2.64)	205(93)	—	3200(14.234)	5350(23.798)	8000(35.586)	11200(49.820)
5/16(7.94)	7	0.109(2.77)	225(102)	6000(26.689)	—	—	—	—
3/8(9.52)	3	0.165(4.19)	220(100)	8500(37.810)	3330(14.813)	5560(24.732)	8360(37.187)	11800(52.489)
3/8(9.52)	7	0.120(3.05)	273(124)	11500(51.155)	4250(18.905)	6950(30.915)	10800(48.040)	15400(68.503)
7/16(11.11)	7	0.145(3.68)	399(181)	18000(80.068)	5700(25.355)	9350(41.591)	14500(64.499)	20800(92.523)
1/2(12.70)	7	0.165(4.19)	517(234)	25000(111.206)	7400(32.917)	12100(53.823)	18800(83.627)	26900(119.657)
1/2(12.70)	19	0.100(2.54)	504(229)	—	7620(33.895)	12700(56.492)	19100(84.961)	26700(118.768)



Superior and Consistent Surface condition

미려하고 균일한 외관

Guaranteed corrosion resistance

우수한 내식성 보증

Superb Mechanical Properties

탁월한 기계적 특성치



COLD DRAWN STEEL BAR



COLD DRAWN STEEL BAR

Cold Drawn Steel Bar is classified into Free Cutting Carbon Steel containing Lead(pb) or Sulphur(s) contents, Carbon Steel for Machine Structural Use($S^{**}C/0.08\% \sim 0.60\%C$), and Stainless Steel.

Free Cutting Carbon Steel is used for making main parts of Motors, Office Appliances, Cameras and Watches.

Carbon Steel is used for making small-size Motor Shafts, Shock Absorbers, Rolls, Screws, Gears, etc.

DONG-IL STEEL added more STC furnace for heat treatment and Draw Bench in 2011 that can provide all products our customer wants. Furthermore, we make the best products with high quality materials through experience and technical skills, so DONG-IL STEEL always satisfy all of our valuable customer needs all around world.

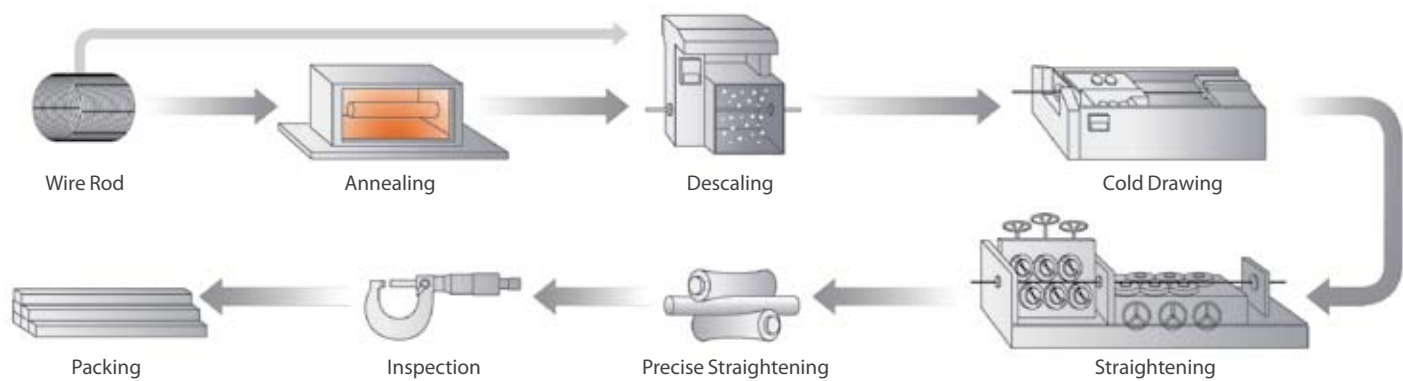
마봉강은 "Pb" 또는 "S" 성분이 함유된 쾌삭강, 기계 구조용 탄소강($S^{**}C/0.08\% \sim 0.60\%C$), 합금강 및 스테인레스 강으로 분류되고 있습니다.

각 제품의 용도도 다양하여 쾌삭강은 자동차, 사무기기, 카메라, 시계 등의 주요부품에 쓰이며, 탄소강은 소형 Motor Shaft, Shock Absorber, Roll Screw, Gear 등 제조에 널리 쓰이고 있습니다.

특히 동일제강은 2011년 소둔열처리로 증설과 Draw Bench 증설로 고객이 원하는 모든 제품을 생산토록 설비를 갖추었으며, 세계 우수의 소재와 50년 이상의 경험 및 기술력의 절묘한 결합에 의해 최고의 품질로 국내외 고객의 Needs를 언제나 만족시키고 있습니다.

COLD DRAWN STEEL BAR

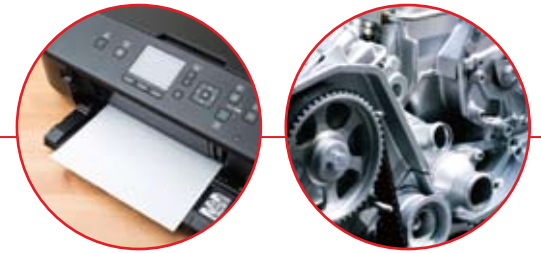
MANUFACTURING PROCESS [제조공정]



THE PURPOSES ACCORDING TO THE STEEL TYPE [강종별 용도]

Classification	Types of symbol and applicable standards			Purpose
	KS 기호	JIS 기호	AISI(SAE)/ASTM 기호	
Carbon steel materials for machine structures. 기계구조용 탄소강재	SM10C	S10C	1010	Motor shaft, various shaft Piston Rod Rack Bar(steering part)
	SM15C	S15C	1015	
	SM20C	S20C	1020	
	SM25C	S25C	1025	
	SM35C	S35C	1035	
	SM45C	SM45C	1045	
	SM48C	SM48C	—	
Carbon steel materials for cold heading 냉간 압조용 탄소강재	SWRCH25K	SWCH25K	—	
	SWRCH45K	SWCH45K	—	
Free cutting steel materials 쾌삭 강재	SUM22	SUM22	1213	O.A Shaft (Printer, Copy machine) Bolt, Nut, materials for parts of automobile O.A Shaft (프린터, 복사기) 볼트, 너트, 자동차 부품용 소재
	SUM24L	SUM24L	12L14	
	SUM23	—	1215	
	SUM43	SUM43	1144	





THE PURPOSES ACCORDING TO THE STEEL TYPE [강종별 용도]

Classification	Types of symbol and applicable standards			Purpose
	KS 기호	JIS 기호	AISI(SAE)/ASTM 기호	
Alloy steel materials for machine structures. 기계구조용 합금강 강재	SCM415	SCM415	—	Various shaft
	SCM435	SCM435	4135	
	SCM440	SCM440	4140	
Bearing steel materials 베어링 강재	SUJ2	SUJ2	52100	Bearing Liner Motion Shaft Wrench Set
Stainless steel 스테인레스 강재	STS303	SUS303	303	O.A Shaft (Printer, Copy machine) Bolt, Nut, Materials for parts of automobile
	STS303C	SUS303C	—	O.A Shaft (프린터, 복사기), 볼트, 너트, 자동차 부품용 소재
	STS304	SUS304	304	Bolt, Nut, Construction materials, Tableware goods, Parts of automobile 볼트, 너트, 건축 자재, 식기용품, 자동차 부품
	STS304L	SUS304L	304L	
	—	SUS304M	—	
	—	—	304/304L	
	STS304J3	SUS304J3	—	Medical supplies, Chemical industry equipment for the external of the construction nearby coast, Industrial semiconductor rock, pipe 의료용품, 해안부근의 건축물 외장 화학공업장치, 산업용 반도체 Rock, 배관용
	STS316	SUS316	316	
	STS316L	SUS316	316L	
	STS316LF	—	—	
	—	—	316/316L	
	—	—	—	Motor Shaft, Bolt, Nut for heat treatment Motor Shaft, 볼트, 너트 열처리용
	STS410	SUS410	410	
	STS416	SUS416	416	Parts of automobile, materials for electrical goods 자동차부품, 전자제품소재
	STS420F	SUS420F	420F	Various shaft, Medical appliances, Spring, Tableware, Pin, Knife 각종 shaft, 의료기, 스프링, 식기, Pin, Knife
	STS420J2	SUS420J2	—	
	STS430	SUS430	430	Parts of automobile, various tank electronic components, Rivet 자동차부품, 각종탱크 전자 부품 Rivet
	STS430F	SUS430F	430F	



COLD DRAWN STEEL BAR

Our C.D. Bar has such characteristics as excellent straightness, brilliant roughness, splendid chip break, strict control of diameter tolerance, beautiful surface and thorough quality control and assurance

We are proud of supplying both domestic and overseas customers with satisfying products in quality.

본 사의 C.D. Bar는 탁월한 직진도, 조도 및 철저한 선경관리를 통해 최상의 제품을 제공하고 있으며, 국내 시장 고객뿐 아니라 해외시장 고객에게 질적으로 만족할 만한 제품을 공급한다는 점에서 큰 자부심을 가지고 있습니다.

DIMENSIONAL TOLERANCE

Grade of Tolerance								
Diameter, Side Length, Width Across Flats, Thickness and Width	Grade 6 (h 6)	Grade 7 (h 7)	Grade 8 (h 8)	Grade 9 (h 9)	Grade 10 (h 10)	Grade 11 (h 11)	Grade 12 (h 12)	Grade 13 (h 13)
3 and under	0	0	0	0	0	0	0	0
	- 0.006	- 0.010	- 0.014	- 0.025	- 0.040	- 0.060	- 0.10	- 0.14
Over 3 to 6 mm	0	0	0	0	0	0	0	0
	- 0.008	- 0.012	- 0.018	- 0.030	- 0.048	- 0.075	- 0.12	- 0.18
Over 6 to 10 mm	—	0	0	0	0	0	0	0
	—	- 0.015	- 0.022	- 0.036	- 0.058	- 0.090	- 0.15	- 0.22
Over 10 to 18 mm	—	0	0	0	0	0	0	0
	—	- 0.018	- 0.027	- 0.043	- 0.070	- 0.11	- 0.18	- 0.27
Over 18 to 30 mm	—	0	0	0	0	0	0	0
	—	- 0.021	- 0.033	- 0.052	- 0.084	- 0.13	- 0.21	- 0.33
Over 30 to 50 mm	—	0	0	0	0	0	0	0
	—	- 0.025	- 0.039	- 0.062	- 0.100	- 0.16	- 0.25	- 0.39
Over 50 to 80 mm	—	0	0	0	0	0	0	0
	—	- 0.030	- 0.046	- 0.074	- 0.12	- 0.19	- 0.30	- 0.46
Over 80 to 120 mm	—	0	0	0	0	0	0	0
	—	- 0.035	- 0.054	- 0.087	- 0.14	- 0.22	- 0.35	- 0.54
Over 120 to 180 mm	—	—	—	—	—	—	0	0
	—	—	—	—	—	—	- 0.40	- 0.63

*Remarks : Deviations in diameter or deviations in length shall be within 30% of the tolerance.



S.M.T Annealing Furnace

S.M.T Annealing Furnace is a preprocessing-stage equipment for the production of high value products. It produces high-quality products which suit customer demand through around 100 heating treatment patterns in a stable environment.

S.M.T Annealing Furnace는 고부가가치의 제품생산을 위한 전처리 단계 설비로 균일한 분위기 내에서 100여 가지의 열처리 Pattern을 통해 고객의 수요에 맞는 최고 품질의 제품을 생산하고 있습니다.



Bar to Bar

Unlike the conventional Coli to Bar method, Bar to Bar is a product produced by the imprint of seal with the bar type materials. We are making every effort to produce various products which suit customer demand and purposes and to impress our clients by using strictly-chosen quality raw materials among world-famous steel companies.

Bar to Bar는 기존의 Coli to Bar 방식과 달리 Bar 형태로 생산된 소재를 인발하여 생산하는 제품입니다. 세계각국의 제강사를 엄선하여 최고 수준의 품질을 갖춘 BILLET을 원재료로 고객의 수요와 용도에 맞춘 다양한 제품 생산 및 고객감동 실현을 위해 최선을 다하고 있습니다.



SPECIFICATIONS WHICH CAN BE SUPPLIED.

	SHAPE	DIAMETER	LENGTH
COIL TO BAR	ROUND(원형)	4 ~ 40	3000~6000
	SQUARE(사각)	4 ~ 25	3000~6000
	HEXAGONAL(육각)	5 ~ 35	3000~6000

	SHAPE	DIAMETER	LENGTH
BAR TO BAR	ROUND(원형)	30 ~ 100	5000 ~ 7000
	SQUARE(사각)	25 ~ 80	5000 ~ 7000
	HEXAGONAL(육각)	28 ~ 80	5000 ~ 7000

*IRREGULAR(이형) : Order Accepted on Consultation by Case. (별도 협의 필요)



QUALITY ASSURANCE

DONG-IL STEEL is the company of approval certifying quality assurance by ISO, KS, JIS

Our company is well-known for the most modernized production and inspection facilities and long experienced technical manpower.

We guarantee the quality of our products through perfect Q.A system over well-organized production process and activities based on the excellent wire rod from the highly reputed mills.

동일제강은 ISO, KS, JIS을 인증받은 회사로서 고객이 요구하는 표준규격 및 용도에 알맞는 제품을 공급하기 위하여 고품질의 원료 및 첨단생산설비와 시험설비, 전문인력을 갖추고 우수한 제품생산은 물론 품질시스템을 통하여 완벽한 품질을 보증하고 있습니다.



CERTIFICATES



HARD DRAWN STEEL WIRE
KS D 3510

PIANO WIRE
KS D 3556

COLD DRAWN STEEL BAR
KS D 3561

LOW P.C. WIRE & P.C. STRAND
KS D 7002



GALV'D STEEL WIRE & STRAND
KS D 7007

LOW P.C. WIRE & P.C. STRAND
JIS G 3536

ISO 9001





DONG-IL STEEL continues to grow
together with your success.

DONG-IL STEEL

DONG-IL STEEL MFG. CO., LTD.

FACTORY (Head Office) : 474-40, ANSEONGMATCHUM-DAERO, MIYANG-MYEON, ANSEONG-SI, KYONGGI-DO, KOREA

TEL:(82-31)677-1234 FAX:(82-31)677-1453

POHANG FACTORY : 289, CHEOLGANGSANDAN-RO, NAM-GU, POHANG-SI, GYEONGSANGBUK-DO, KOREA

TEL:(82-70)4370-8852 FAX:(82-54)277-1453

SEOUL OFFICE : 3RD FL., 38, TEHERAN-RO 2-GIL, GANGNAM-GU, SEOUL, KOREA

TEL:(82-2)552-2587 FAX:(82-2)561-2853

BUSAN OFFICE : 54, SUITE 305, GWAEGAM-RO, SASANG-GU, BUSAN, KOREA

TEL:(82-51)504-4680 FAX:(82-51)504-4687

<http://www.dongil-steel.com>