



Seil Special Steel

www.seilspecialsteel.com



- **Special Steel** (Nickel, Manganese, Molybdenum, etc)
- **Carbon Steel Coil**
- **Carbon Steel Strip**
- **Return Spring**
- **Automotive parts**
- **Industrial use**

Company Introduction

Seil Special Steel

Established over 20 years ago, Seil Special Steel's unique manufacturing process and product offering makes it the only capable factory in South Korea specializing in the production of cold-rolled carbon steel coils/strips, seatbelt springs/parts, and various high quality steel products according to Customer needs.

Being a supplier in the seatbelt industry, Seil Special Steel puts the utmost priority in quality products through continuous investment in R&D, management/staff training programs, quality control assurance processes, and state of the art equipment, because we know bad products could be the difference between life or death.

In addition to producing high quality products, we are able to offer very competitive prices and on time deliveries because we keep all our operations in house, without having to send products out for cutting, special treatment, or other processes.

As the global market and demands continue to change, Seil Special Steel will continue to develop new types of steel products, swiftly respond to market conditions, and continue to position ourselves as the frontrunner in the cold rolled steel products industry.

Seil Special Steel hopes that you will have your continuous interest and participation with us so that we can grow and develop further together.



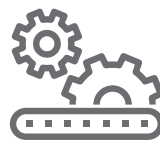
Type of Business

20 High Cold Rolled Mill
Carbon Steel Strip
Seatbelt Spring Assembly



Employee

70
Persons



Factory

7,593.59
m²



Address

570-17, Seobusaneopdo-ro,
Jeongeup-si, Jeonbuk-do,
Republic of Korea



Spiral Spring Assembly Process

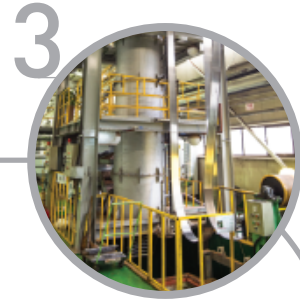
ISO9001 / ISO14001 / IATF6949



Warehousing of raw materials



Job Order Preparation



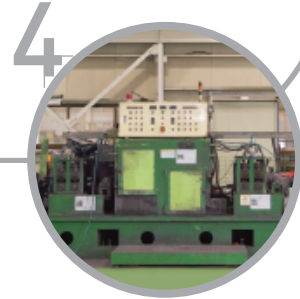
Heat Treatment



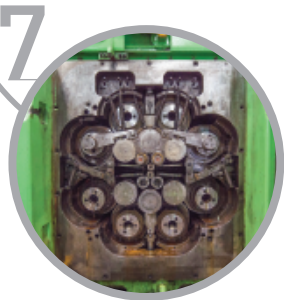
20 High Cold Rolled Mill -1



20 High Cold Rolled Mill Preparation



Polishing



20 High Cold Rolled Mill -2



Slitter



Special Heat Treatment



RFQ



Seatbelt Spring Assembly



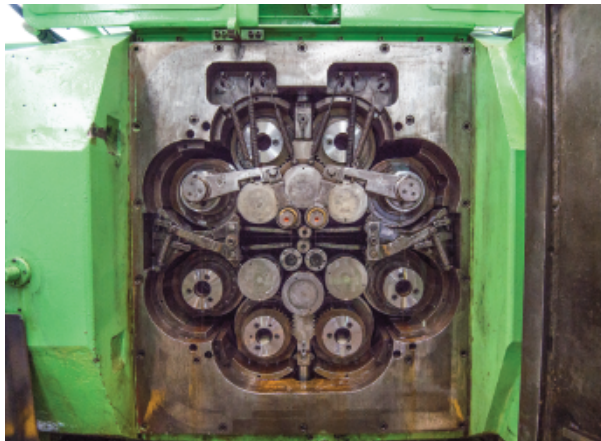
Spiral Spring Production

Facilities

Factory Line1

Cold Rolled Mill Capacity(Sandsmir) – 20 Cold Rolled Mill

Product	Device	Capacity/Day	Capacity/Year
Cold Rolled Mill	ZR23-19*2	20 Ton	5,760 Ton



Facilities

Factory Line 2, 3

Seatbelt Spring Capacity Slit/Heat Treatment/Assembly

Product	Device	Capacity/Day	Capacity/Year
Seat Belt Spring Assembly	Re-winding	60,000 EA	14,400,000 EA



Facilities

Factory Line 4

(Unit : Metric Ton /Year)

Product	Line	Capacity/Year
Pickling & Oiling	1 Lines	300,000 MT
Wide Slitting	4 Lines	600,000 MT
Narrow Slitting	4 Lines	250,000 MT
Annealing	Hydrogen gas, 54 Bases	449,000 MT
Cold Rolling Mill	Narrow, Mid, Wide 3 Lines	480,000 MT
Traverse Winding Line	Oscillating 2 Lines	9,000 MT



Pickling & Oiling



Wide Slitting
Narrow Slitting



Annealing



Cold Rolling Mill



Traverse Winding Line

Factory Line 5

(Unit : Metric Ton /Year)

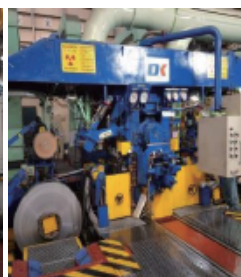
Product	Line	Capacity/Year
Narrow Slitting	4 Lines	80,000 MT
Annealing	Hydrogen gas, 14 Bases	90,000 MT
Cold Rolling Mill	6Hi, Z-Mill, 4Hi 3 Lines	102,000 MT
Mini Shear Line	Shearing 1 Line	12,000 MT
Edge Controller	4 Lines	700 MT



Narrow Slitting



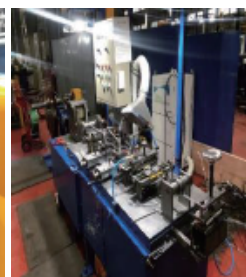
Annealing



Cold Rolling Mill



Mini Shear Line

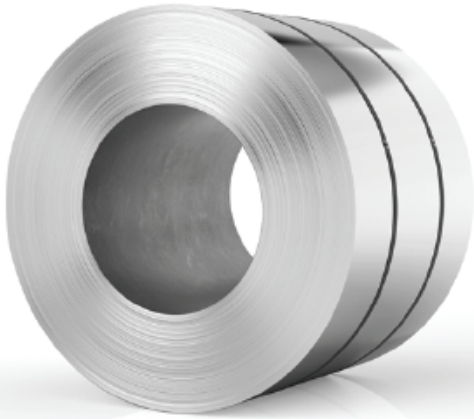


Edge Controller

High Carbon Steel and Special Steel

Classification	Symbol					
	KS	GB	JIS	DIN	BS	SAE/AISI
High Carbon Steel Strip (JIS G 3311)	S30CM	30	S30CM	Ck30	-	1030
	S35CM	35	S35CM	Ck35	-	1035
	S45CM	45	S45CM	Ck45	-	1045
	S50CM	50	S50CM	Ck50	-	1050
	S55CM	55	S55CM	Ck55	-	1055
	S60CM	60	S60CM	Ck60	CS60	1060
	S65CM	65	S65CM	Ck65	-	-
	S70CM	-	S70CM	-	CS70	1070
	S75CM	-	S75CM	Ck75	-	1074
	S85CM	-	S85CM	-	CS80	1084
	-	-	-	-	-	1552
Carbon Tool Steel Strip (JIS G 3311)	SK2M(SK120M)	T12	SK2M	C125W2	BW1C	-
	SK3M(SK105M)	T10	SK3M	C105W2	BW1B	1095
	SK4M(SK95M)	-	SK4M	-	-	1086
	SK5M(SK85M)	-	SKS5M	-	-	-
	SK6M(SK75M)	-	-	-	-	-
	SK7M(SK65M)	-	-	-	-	-
	SK5M Mo	T8	SK5M	-	-	-
	SK2M Cr4	-	SK2M Cr4	-	-	-
Alloy Tool Steel Strip (JIS G 3311)	SKS2M	-	-	-	-	-
	SKS5M	-	SKS5M	-	-	-
	SKS7M	-	-	-	-	-
	SKS51M	-	SKS51M	-	-	-
Nickel Chromium Steel Strip (JIS G 3311)	SNC415M	-	SNC415M	-	-	-
	SNC631M	-	SNC631M	-	-	-
	SNC836M	-	SNC836M	-	-	-
Nickel Chromium Molybdenum Steel Strip (JIS G 3311)	SNCM220M	-	SNCM220M	-	805A20/805M20	8615/8620
Manganese Steel Strip (JIS G 3311)	SMn433M	-	SMn433M	-	120M36/150M36	1536
Chromium Molybdenum Steel Strip (JIS G 3311)	SCM415M	15CrMo	SCM415M	15CrMo	1502-620	-
	-	-	-	16MnCr5M	-	-
	SCM420M	-	SCM420M	-	708M20	-
	SCM430M	-	SCM430M	-	708A30	4130
	SCM435M	35CrMo	SCM435M	34CrMo	708A37/709A37	4135
SCM440M	-	SCM440M	42CrMo4	708A40/709M40	4140/4142	
Spring Steel Strip (JIS G 3311)	SUP6M	-	SUP6M	-	250A53	-
	SUP9M	-	SUP9M	55Cr3	527A60	-
	SUP10M	50CrV4	SUP10M	50CrV4	En47	6150
	-	51CrV4	-	51CrV4	-	-
	-	58CrV4	-	58CrV4	-	-

Carbon Steel Coil



Chemical Composition

Steel Grade	SAE1078(Posco POS1081)		
C	0.72 ~ 0.85	P	Max.0.03
Mn	0.30 ~ 0.60	S	45
Si	0.10 ~ 0.30	Cr	34

Classification

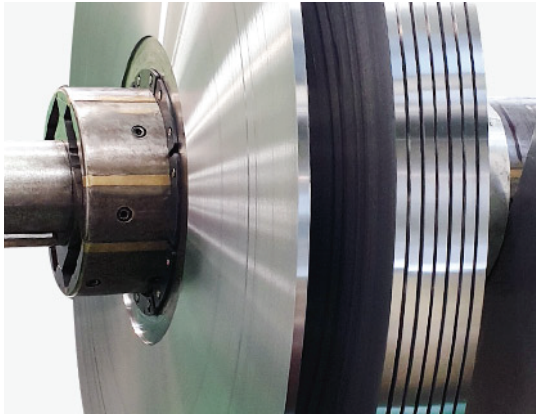
Commodity	Application
Texture Steel Strip	Electrical Appliance : Coed Retractor Spring
	Automobile : Spring for safety belts

Mechanical Quality

Microstructure	Fine lamellar sorbitic structure with special rolling texture	
Surface	Bright finish with cold rolling	
Camber	Max. 3mm / 1000mm	
Flatness	Max. 0.8%	
Edge	Slit edge	
Inside Diameter	300mm ~ 400mm	
Width	7mm ~ 10mm, 146mm, 292mm	
Thickness Tolerances	0.30mm	±0.007mm
	±0.273mm	±0.007mm
	±0.26mm	±0.005mm
	±0.243mm	±0.005mm
	±0.223mm	±0.005mm
	±0.19mm	±0.004mm
	±0.18mm	±0.004mm
	±0.165mm	±0.004mm

Thickness (mm)	Tensile Strength(N/mm ²)	Hardness
0.30	2000 ~ 2200	>=HV500 ~ 520
0.273	2050 ~ 2250	>=HV510 ~ 530
0.26	2050 ~ 2250	>=HV510 ~ 530
0.243	2050 ~ 2250	>=HV510 ~ 530
0.223	2050 ~ 2250	>=HV510 ~ 530
0.19	2200 ~ 2450	>=HV520 ~ 540
0.18	2200 ~ 2450	>=HV520 ~ 540
0.165	2200 ~ 2450	>=HV520 ~ 540

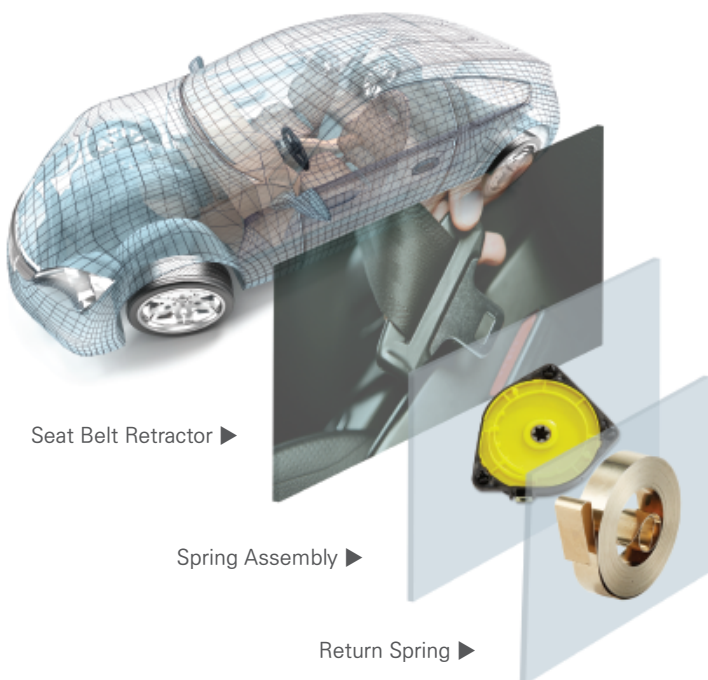
Carbon Steel Strip



- Spring Width : 4mm ~ 300mm
- Spring Thickness : 0.0mm ~ 2.5mm
- Material : SAE1078(Posco POS1081)
- Life Time : 500,000 Times
- Durability Rotation Test : Over 300,000 Times
- Salt Spray Test : Over 200,000 Times
- Hardness : Customizable
- Coil Inner Diameter : 300mm standard
- Coil Outer Diameter : 750mm-900mm standard



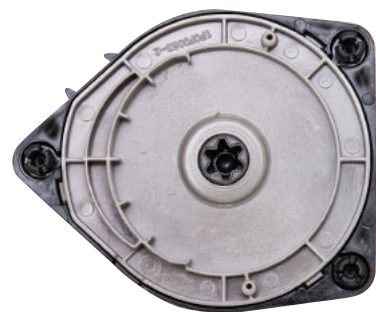
Seatbelt Spring Assembly



Seat Belt Retractor ▶

Spring Assembly ▶

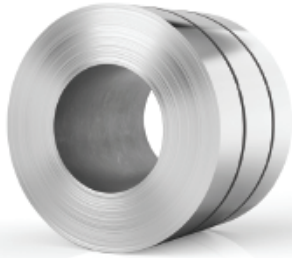
Return Spring ▶



Product Range

- Spring Width : 4mm ~ 300mm
- Spring Thickness : 0.0mm ~ 2.5mm
- Material : SAE1078(Posco POS1081)
- Life Time : 500,000 Times
- Durability Rotation Test : Over 300,000 Times
- Salt Spray Test : Over 200,000 Times
- Hardness : Customizes

Cold Rolled Steel

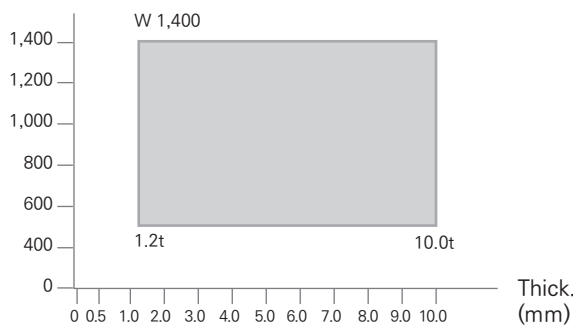


Cold rolled steel is made through a unique process of hot rolled steel undergoing a chemical treatment (Pickling), removing surface scale impurities, heat treatment, as well as a rolling process at room temperature in order to make/adjust the level of thickness, material, surface finish and shape requested by the Customer.

Seil Special Steel's cold rolled special steel is used for high carbon steel and special steel alloys that are used for precision parts in various industries including automotive, aerospace, machining, marine, and more. In order to satisfy the diverse needs of our Customers, we invest and operate in the best state of the art facilities for cold rolled special steel production and produce top quality products through precision control and quality assurance processes. We supply products that are an integral part of our modern society including major auto engine/transmission parts, seatbelt parts/assemblies, and various other high quality carbon steel parts according to the Customer needs.

Product Specifications

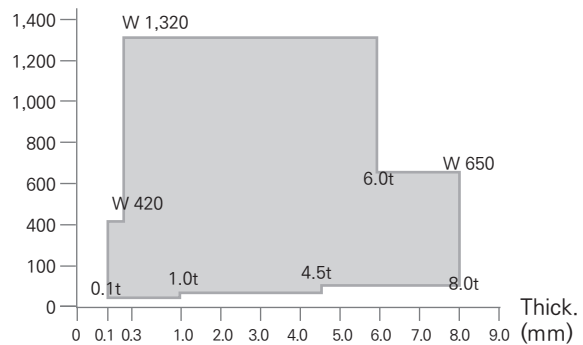
Pickled & Oiled Coil (PO)



Thickness (mm)	Width(mm)	Capa./Year
1.2 ~ 10.0	600 ~ 1,400	600,000 MT

PO production Capa : 200,000 MT

Cold Rolled Coil(CR)



Thickness (mm)	Width (mm)	Capa./Year
0.10 ~ 0.14	9 ~ 420	400,000 MT
0.15 ~ 6.40	9 ~ 1,320 *	
6.50 ~ 8.00 *	120 ~ 650 *	

* Need to discussed further

Oscillating Coil

Thickness (mm)	Width (mm)	Capa./Year
0.32 ~ 2.5	15 ~ 65	9,000 MT

Mini Shear Line

Thickness (mm)	Width (mm)	Capa./Year
1.2 ~ 6.0	100~600	11,400 MT

Product Application

Automotive parts	engine parts, seat belts, seat recliners, transmissions, door latches, seat renderer, and all interior/exterior components.
Industrial use	saw, shank, knife, springs, safety hats, washer clip, nail clipper, needles for use in textile manufacturing, etc.











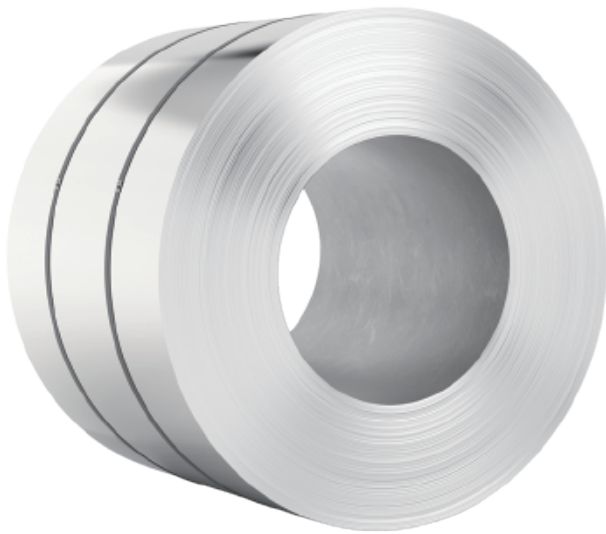
Automotive parts



Industrial use

Special Steel Products

	<p>Mild Steels SPCC, SPCD, SPCE, SAE1010, SAE1015, SAE1020 Main Product : Bearing Cage, Friction Plate, Machine Parts etc</p>
	<p>Carbon Steels S35C, S45C, S50C, S55C, S65C, SAE1070, SAE1074, C80 Main Product : Cushion Plate, Safety Belt Parts etc</p>
	<p>Carbon Tool Steels SK85, SK95, SK105, SK120 Main Product : Clip, Measuring Tape, Needle, Spring, Washer etc</p>
	<p>High Strength Steels 500 Grade, 800 Grade, 1000 Grade (N/mm²) Main Product : Automobile Parts, Seat Rail etc</p>
	<p>Spring Steels DN50CrV4, DN51CrV4, DN58CrV4 Main Product : Clutch Diaphragm, Hose Clamps, Spring etc</p>
	<p>Alloy Tool Steels SKS51, SKS81, SK85Mo, SK2Cr5 Main Product : Cutlery, Lumbering, Round Saws etc</p>
	<p>Cr-Mo Steels SCM415, SCM430, SCM435, AISI4140 Main Product : Chain, Safety Belt Parts, Thompson Blades etc</p>
	<p>Ni-Cr-Mo Steels SNM220, SAE8660, SAE6150, 68CrNiMo33 Main Product : Chain Saw, Clutch Parts, Door, Recliner etc</p>



Seil Special Steel

Head Office/Factory

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