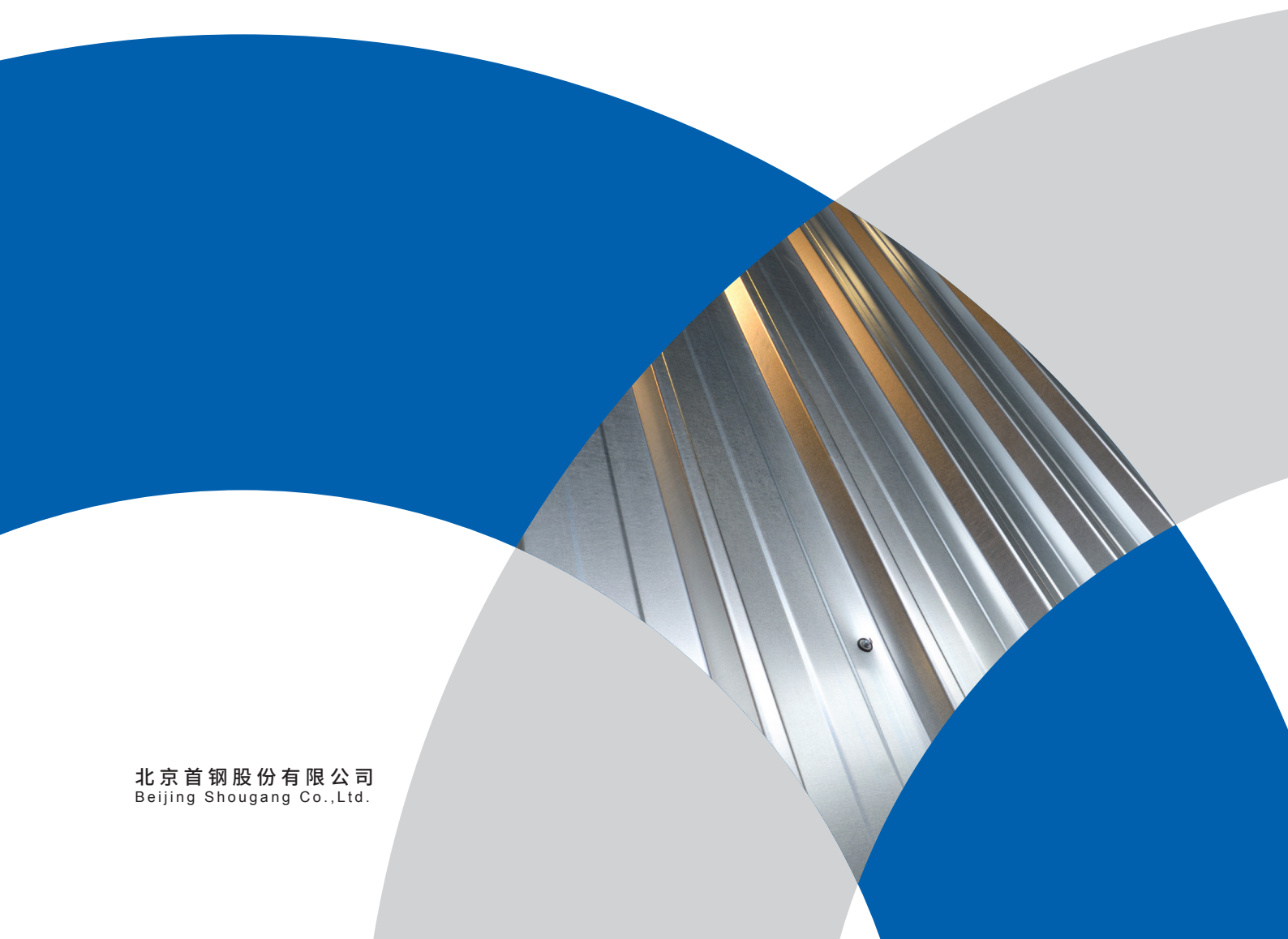
北京首钢股份有限公司
BEIJING SHOUGANG CO.,LTD.

热基锌铝镁
产品手册

HOT-DIP ZN-AL-MG ALLOY
HOT-ROLLED STEEL SHEETS PRODUCT MANUAL



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Products Introduction

产品介绍

1.1 牌号和用途 Steel Grades and Application

钢种分类	牌号 Steel Grades	用途 Application	执行标准 Standard
低碳钢 Low Carbon Sheets	DD51D+ZM	一般冷成形用 Commercial purpose	QSGJS 0014-2020a
	DD52D+ZM		
	SGHCD+ZM		
碳素结构钢 Carbon Structural Sheets l / 低合金高强钢 High-strength Low-alloy Sheets	S220GD+ZM	结构用 Structural purpose	
	S250GD+ZM		
	S280GD+ZM		
	S300GD+ZM		
	S320GD+ZM		
	S350GD+ZM		
	S390GD+ZM		
	S400GD+ZM		
	S420GD+ZM		
	S450GD+ZM		
	S500GD+ZM		
	S550GD+ZM		
	SGH340D+ZM		
	SGH400D+ZM		
	SGH440D+ZM		
	SGH490D+ZM		
	SGH540D+ZM		
低合金高强钢 High-strength Low-alloy Sheets	HD300LAD+ZM	结构用 Structural purpose	
	HD340LAD+ZM		
	HD380LAD+ZM		
	HD420LAD+ZM		
	HD460LAD+ZM		
	HD500LAD+ZM		
	HD550LAD+ZM		
	HD700LAD+ZM		
双相钢 Dual Phase Steel	HD330/580DPD	结构用 Structural purpose	
铁素体 - 贝氏体钢 Ferrite-Bainite Steel	HD300/450FBD		
	HD440/580FBD		
	HD600/780FBD		
复相钢 Complex Phase Steel	HD660/760CPD		

1.2 化学成分 Chemical Compositions （单位 Unit:%）

牌号 Steel Grades	C ≤	Si ≤	Mn ≤	P ≤	S ≤	Ti[a] ≤
DD51D	0.18	0.50	1.20	0.12	0.045	0.30
DD52D	0.12	0.50	0.60	0.10	0.045	0.30

[a] 可用 Nb 代替部分 Ti, 此时 Nb 和 Ti 的总含量应不大于 0.30%。
Part of Ti can be replaced by Nb, and the total content of Nb and Ti should not be greater than 0.30%.

牌号 Steel Grades	C ≤	Si ≤	Mn ≤	P ≤	S ≤
S220GD、S250GD、S280GD、S300GD、S320GD、S350GD、S390GD、S400GD、S420GD、S450GD、S500GD、S550GD	0.20	0.60	1.70	0.10	0.045

牌号 Steel Grades	C ≤	Mn ≤	P ≤	S ≤
SGHCD	0.15	0.80	0.05	0.05
SGH340D	0.25	1.70	0.20	0.05
SGH400D	0.25	1.70	0.20	0.05
SGH440D	0.25	2.00	0.20	0.05
SGH490D	0.30	2.00	0.20	0.05
SGH540D	0.30	2.50	0.20	0.05
注：必要时可添加本表中不含的合金元素。				

牌号 Steel Grades	C ≤	Si ≤	Mn ≤	P ≤	S ≤	Al ≥	Ti ≤	Nb ≤
HD300LAD	0.12	0.50	1.30	0.030	0.025	0.015	0.15	0.10
HD340LAD	0.12	0.50	1.50	0.030	0.025	0.015	0.15	0.10
HD380LAD	0.12	0.50	1.50	0.030	0.025	0.015	0.15	0.10
HD420LAD	0.12	0.50	1.60	0.030	0.025	0.015	0.15	0.10
HD460LAD	0.12	0.50	1.65	0.030	0.025	0.015	0.15	0.10
HD500LAD	0.12	0.50	1.70	0.030	0.025	0.015	0.15	0.10
HD550LAD	0.12	0.60	1.80	0.030	0.025	0.015	0.15	0.10
HD700LAD	0.12	0.60	2.10	0.030	0.025	0.015	0.20	0.10

牌号 Steel Grades	C ≤	Si ≤	Mn ≤	P ≤	S ≤	Al	Ti+Nb ≤	Cr+Mo ≤	B ≤	Cu ≤
HD330/580DPD	0.14	1.0	2.20	0.060	0.010	0.015 ～ 0.1	0.15	1.40	0.005	0.20
HD300/450FBD	0.18	0.50	2.00	0.050	0.010	0.015 ～ 2.0	0.15	1.00	0.005	0.20
HD440/580FBD	0.18	0.50	2.00	0.050	0.010	0.015 ～ 2.0	0.15	1.00	0.010	0.20
HD600/780FBD	0.18	0.50	2.00	0.050	0.010	0.015 ～ 2.0	0.15	1.00	0.010	0.20
HD660/760CPD	0.18	1.00	2.20	0.050	0.010	0.015 ～ 1.2	0.25	1.00	0.005	0.20

1.3 力学性能 Mechanical Properties

牌号 Steel Grades	屈服强度 Yield strength[a,b] MPa	抗拉强度 Tensile strength[a] Rm,MPa	断后伸长率 Elongation after fracture [a], A_{80mm},%, ≥
DD51D+ZM[c]	—	270 ～ 500	22
DD52D+ZM [c]	140 ～ 300[e]	270 ～ 420	26

[a] 试样为 GB/T 228.1-2010 中的 P6 试样 (L_0=80mm,b_0 = 20mm), 试样方向为横向。No. P6 test piece(L 0=80 mm,b0=20mm)specified in GB/T 228.1-2010 and taken in the transverse direction apply.
[b] 无明显屈服现象时采用 $R_{p0.2}$, 否则采用下屈服强度 R_{eL}。If definite yield phenomenon is not present, the yield strength values apply to the 0.2 %-proof strength (Rp0.2),otherwise the yield strength values apply to the lower yield strength(ReL).
[c] 力学性能有效期为制造完成后 1 个月内。 Mechanical properties just for products within 1 month from manufactured.

牌号 Steel Grades	屈服强度 Yield strength[a,b] MPa, ≥	抗拉强度 Tensile strength[a,c] R_m, MPa, ≥	断后伸长率 Elongation after fracture[a] ,A_{80mm},%, ≥
S220GD+ZM	220	300	20
S250GD+ZM	250	330	19
S280GD+ZM	280	360	18
S300GD+ZM	300	370	18
S320GD+ZM	320	390	17
S350GD+ZM	350	420	16
S390GD+ZM	390	460	16
S400GD+ZM	400	470	15
S420GD+ZM	420	480	15
S450GD+ZM	450	510	14
S500GD+ZM	500	530	—
S550GD+ZM	550	560	—

力学性能有效期为制造完成后 1 个月内。 Mechanical properties just for products within 1 month from manufactured.

[a] 试样为 GB/T 228.1-2010 中的 P6 试样 (L_0=80mm,b_0 = 20mm), 试样方向为纵向。No. P6 test piece(L0=80 mm,b0=20mm) specified in GB/T 228.1-2010 and taken in the longitudinal direction apply.
[b] 无明显屈服现象时采用 $R_{p0.2}$, 否则采用上屈服强度 R_{eH}。If definite yield phenomenon is not present, the yield strength values apply to the 0.2%-proof strength (Rp0.2), otherwise the yield strength values apply to the upper yield strength(ReH).
[c] 除 S550GD+ZM 外 , 其他牌号的抗拉强度可要求 140MPa 的范围值。For all grades except S550GD+ZM, a range of 140MPa can be expected for tensile strength.

牌号 Steel Grades	屈服强度 Yield strength[a,b] MPa	抗拉强度 Tensile strength[a] R_m, MPa	断后伸长率 Elongation after fracture[a] ,A_{80mm},%, ≥	n 值 [a] $n_{10-20/Ag}$ ≥
HD300LAD+ZM	300 ～ 380	380 ～ 500	24	0.14
HD340LAD+ZM	340 ～ 440	420 ～ 540	22	0.13
HD380LAD+ZM	380 ～ 480	450 ～ 570	20	-
HD420LAD+ZM	420 ～ 520	480 ～ 600	18	-
HD460LAD+ZM	460 ～ 560	520 ～ 640	16	-
HD500LAD+ZM	500 ～ 620	560 ～ 700	14	-
HD550LAD+ZM	550 ～ 670	610 ～ 750	12	-
HD700LAD+ZM	700 ～ 850	750 ～ 950	10	-

[a] 试样为 GB/T 228.1-2010 中的 P6 试样 (L_0=80mm,b_0 = 20mm), 试样方向为纵向。No. P6 test piece(L0=80 mm,b0=20mm) specified in GB/T 228.1-2010 and taken in the longitudinal direction apply.
[b] 无明显屈服现象时采用 $R_{p0.2}$, 否则采用下屈服强度 R_{eL}。If definite yield phenomenon is not present, the yield strength values apply to the 0.2 %-proof strength (Rp0.2),otherwise the yield strength values apply to the lower yield strength(ReL).

牌号 Steel Grades	屈服强度 Yield strength[a,b] MPa，≥	抗拉强度 Tensile strength[a] R_m, MPa，≥	断后伸长率 Elongation after fracture[a],A_{50mm},%, ≥
SGHCD+ZM	205	270	-
SGH340D+ZM	245	340	20
SGH400D+ZM	295	400	18
SGH440D+ZM	335	440	
SGH490D+ZM	365	490	16
SGH540D+ZM	400	540	

[a] 试样为 JIS Z 2241 规定的 No.5 试样，试样方向为纵向。 No.5 test piece specified in JIS Z2241 and taken in the longitudinal direction apply.
[b] 无明显屈服现象时采用 $R_{p0.2}$, 否则采用上屈服强度 R_{eH}。If definite yield phenomenon is not present, the yield strength values apply to the 0.2%-proof strength (Rp0.2), otherwise the yield strength values apply to the upper yield strength(ReH).

牌号 Steel Grades	屈服强度 Yield strength[a,b] MPa	抗拉强度 Tensile strength[a] R_m, MPa	断后伸长率 Elongation after fracture[a,c] ,A_{80mm},%, ≥	n 值 [a]		BH_2[a] MPa, ≥
				n_{4-6}, ≥	$n_{10-20/Ag}$ ≥	
HD330/580DPD+ZM	330 ～ 450	580 ～ 680	19	0.16	0.13	30

[a] 试样为 GB/T 228.1-2010 中的 P6 试样 (L_0=80mm,b_0 = 20mm), 试样方向为纵向。No. P6 test piece(L0=80 mm,b0=20mm) specified in GB/T 228.1-2010 and taken in the longitudinal direction apply.
[b] 无明显屈服现象时采用 $R_{p0.2}$, 否则采用下屈服强度 R_{eL}。If definite yield phenomenon is not present, the yield strength values apply to the 0.2 %-proof strength (Rp0.2),otherwise the yield strength values apply to the lower yield strength(ReL).

牌号 Steel Grades	屈服强度 Yield strength[a,b] MPa	抗拉强度 Tensile strength[a] R_m, MPa	断后伸长率 Elongation after fracture[a,c] ,A_{80mm},%, ≥	BH_2[a] MPa, ≥
HD300/450FBD+ZM	300 ～ 400	450 ～ 550	24	30
HD440/580FBD+ZM	440 ～ 600	580 ～ 700	15	30
HD600/780FBD+ZM	600 ～ 760	780 ～ 920	12	30
HD660/760CPD+ZM	660 ～ 820	760 ～ 960	10	30

[a] 试样为 GB/T 228.1-2010 中的 P6 试样 (L_0=80mm,b_0 = 20mm), 试样方向为纵向。No. P6 test piece(L0=80 mm,b0=20mm) specified in GB/T 228.1-2010 and taken in the longitudinal direction apply.
[b] 无明显屈服现象时采用 $R_{p0.2}$, 否则采用下屈服强度 R_{eL}。If definite yield phenomenon is not present, the yield strength values apply to the 0.2 %-proof strength (Rp0.2),otherwise the yield strength values apply to the lower yield strength(ReL).

1.4 拉伸应变痕 stretcher Strain Mark

钢种 Steel Grades	拉伸应变痕 Tensile Strain Marks
低碳钢、碳素结构钢、高强度低合金钢 Low Carbon Sheets、 Carbon Structural Sheets、High-strength Low-alloy Sheets	不做保证。 No guarantee period.
双相钢、铁素体 - 贝氏体钢、复相钢 Dual Phase Steel、Ferrite-Bainite Steel、Complex Phase Steel	使用时不应出现拉伸应变痕。 The products shall be free from stretcher strain marks when forming.

1.5 可订货规格 Sizes (单位 Unit:mm)

钢种 Steel Grades	屈服强度 Yield strength	公称厚度 Nominal thickness	公称宽度 Nominal width
低碳钢 Low Carbon Sheets	⩽ 250MPa	1.2 ⩽ d ＜ 1.8	1250/1270
		1.8 ⩽ d ⩽ 2.0	900-1500
		2.0 ＜ d ⩽ 6.0	
碳素结构钢 Carbon Structural Sheets	＜ 500MPa	1.2 ⩽ d ＜ 1.8	1250/1270
		1.8 ⩽ d ⩽ 2.0	900-1500
		2.0 ＜ d ＜ 4.0	
		4.0 ⩽ d ⩽ 6.0	900-1400
	⩾ 500MPa	1.4 ⩽ d ＜ 2.0	1250/1270
		2.0 ⩽ d ⩽ 4.0	900-1500
		4.0 ＜ d ⩽ 6.0	900-1300
低合金高强钢 High-strength Low-alloy Sheets	⩽ 500MPa	1.8 ⩽ d ＜ 4.0	900-1500
		4.0 ⩽ d ⩽ 6	900-1400
	＞ 500MPa	2.0 ⩽ d ⩽ 4.0	900-1500
		4.0 ⩽ d ⩽ 6.0	900-1300
双相钢 / 复相钢 Dual Phase Steel、Complex Phase Steel	⩽ 500MPa	1.8 ⩽ d ⩽ 4.0	900-1500
		4.0 ⩽ d ⩽ 6.0	900-1400
	＞ 500MPa	2.5 ⩽ d ⩽ 4.0	900-1500

1.6 厚度允许偏差 Thickness tolerance

规定的最小屈服强度 Specified minimum yield strength Re MPa	公称厚度 Nominal thickness	下列公称宽度下的厚度允许偏差 Tolerances on thickness for a nominal width[a,b]					
		普通精度 PT.A Normal tolerances			高级精度 PT.B Advanced tolerances		
		⩽ 1200	＞ 1200~1500	＞ 1500	⩽ 1200	＞ 1200~1500	＞ 1500
Re ＜ 260	0.8~1.00	±0.06	±0.07	±0.08	±0.045	±0.050	±0.060
	＞ 1.00~1.20	±0.07	±0.08	±0.09	±0.050	±0.060	±0.070
	＞ 1.20~1.60	±0.10	±0.11	±0.12	±0.060	±0.070	±0.080
	＞ 1.60~2.00	±0.12	±0.13	±0.14	±0.070	±0.080	±0.090
	＞ 2.00~2.50	±0.14	±0.15	±0.16	±0.090	±0.100	±0.110
	＞ 2.50~3.00	±0.17	±0.17	±0.18	±0.110	±0.120	±0.130
	＞ 3.00 ～ 5.00	±0.20	±0.20	±0.21	±0.15	±0.16	±0.17
	＞ 5.00 ～ 6.00	±0.22	±0.22	±0.23	±0.17	±0.18	±0.19
260 ⩽ Re ＜ 360[c]	0.8~1.00	±0.07	±0.08	±0.09	±0.050	±0.060	±0.070
	＞ 1.00~1.20	±0.08	±0.09	±0.11	±0.060	±0.070	±0.080
	＞ 1.20~1.60	±0.11	±0.13	±0.14	±0.070	±0.080	±0.090
	＞ 1.60~2.00	±0.14	±0.15	±0.16	±0.080	±0.090	±0.110
	＞ 2.00~2.50	±0.16	±0.17	±0.18	±0.110	±0.120	±0.130
	＞ 2.50~3.00	±0.19	±0.20	±0.20	±0.130	±0.140	±0.150
	＞ 3.00 ～ 5.00	±0.22	±0.24	±0.25	±0.17	±0.18	±0.19
	＞ 5.00 ～ 6.00	±0.24	±0.25	±0.26	±0.19	±0.20	±0.21
360 ⩽ Re ⩽ 420	0.8~1.00	±0.08	±0.09	±0.11	±0.060	±0.070	±0.080
	＞ 1.00~1.20	±0.10	±0.11	±0.12	±0.070	±0.080	±0.090
	＞ 1.20~1.60	±0.13	±0.14	±0.16	±0.080	±0.090	±0.110
	＞ 1.60~2.00	±0.16	±0.17	±0.19	±0.090	±0.110	±0.120
	＞ 2.00~2.50	±0.18	±0.20	±0.21	±0.120	±0.130	±0.140
	＞ 2.50~3.00	±0.22	±0.22	±0.23	±0.140	±0.150	±0.160
	＞ 3.00 ～ 5.00	±0.22	±0.24	±0.25	±0.17	±0.18	±0.19
	＞ 5.00 ～ 6.00	±0.24	±0.25	±0.26	±0.19	±0.20	±0.21
420 ＜ Re ⩽ 900	0.8~1.00	±0.09	±0.11	±0.12	±0.070	±0.080	±0.090
	＞ 1.00~1.20	±0.11	±0.13	±0.14	±0.080	±0.090	±0.110
	＞ 1.20~1.60	±0.15	±0.16	±0.18	±0.090	±0.110	±0.120
	＞ 1.60~2.00	±0.18	±0.19	±0.21	±0.110	±0.120	±0.140
	＞ 2.00~2.50	±0.21	±0.22	±0.24	±0.140	±0.150	±0.170
	＞ 2.50~3.00	±0.24	±0.25	±0.26	±0.170	±0.180	±0.190
	＞ 3.00 ～ 5.00	±0.26	±0.27	±0.28	±0.23	±0.24	±0.26
	＞ 5.00 ～ 6.00	±0.28	±0.29	±0.30	±0.25	±0.26	±0.28

[a] 钢 带两端各 10m 内的厚度允许偏差可比规定值超出 50%。
The thickness tolerances within 10m at each end of the steel strip may be increased by a maximum of 50%.
[b] 对双面镀层重量之和不小于 450g/m^2 的产品，其厚度允许偏差可增加 ±0.01mm。
The thickness tolerance of hot-dip coating products with the sum of double-sided coating weight not less than 450g/m2 can exceed ± 0.01mm.
[c] 牌号 DD51D+ZM 厚度允许偏差应符合此档规定。DD51D+ZM should comply with this requirement.

1.7 推荐的公称镀层重量、镀层代号及镀层重量检测值
Recommended nominal coating weight, coating No. and measured coating weight

镀层形式 Coating form	镀层种类 Coating variety	推荐公称镀层重量 Coating weight g/m²	镀层代号 Coating No. [a]	JIS G 3302 镀层代码 Coating No.	双面三点平均值 Average Coating weight in both sides and three spots g/m², ≥	双面单点值 Coating weight in both sides and single spot g/m², ≥	单面单点值 Coating weight in each side and single spot g/m², ≥
等厚镀层	ZM	80	80	Z08	80	70	32
		90	90	-	90	77	36
		100	100	Z10	100	85	40
		120	120	Z12	120	102	48
		140	140	Z14	140	120	56
		150	150	-	150	130	60
		160	160	-	160	136	64
		180	180	Z18	180	153	72
		190	190	-	190	162	76
		200	200	Z20	200	170	80
		220	220	Z22	220	187	88
		225	225	-	225	195	90
		250	250	Z25	250	215	100
		270	270	-	270	234	108
		275	275	Z27	275	235	110
		300	300	-	300	255	120
		305	305	-	305	275	122
		310	310	-	310	264	124
		325	325	-	325	277	130
		350	350	Z35	350	300	140
		375	375	Z37	375	319	150
		400	400	-	400	340	160
		425	425	-	425	362	170
		430	430	-	430	366	172
		450	450	Z45	450	385	180
		500	500	-	500	425	200
		550	550	-	550	468	220
		600	600	Z60	600	510	240

1.8 表面处理 Surface treatment

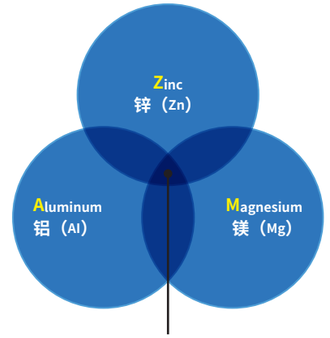
序号 Serial nurber	类别 category	代码 Code No.	特征 Features
1	三价铬钝化 Cr3+ treatment	C3	该表面处理可减少产品在运输和储存期间表面产生白锈或黑锈。三价铬钝化处理时，应限制钝化膜中对人体有害的六价铬成分。The treatment can prevent white or black rusts formed on product surfaces during transportation and storage.During Cr3+ passivation treatment, the Cr6+ components in the passivation film that harmful to human body shall be limited
2	涂油 Oiling	O	该表面处理可减少产品在运输和储存期间表面产生白锈，所涂的防锈油一般不作为后续加工用的轧制油和冲压润滑油。The treatment can prevent white rusts formed on product surfaces during transportation and storage. The anti-rust oil is generally not as subsequent processing stamping in the rolling and lubricating.
3	三价铬钝化 + 涂油 Cr3+ treatment+Oiling	CO3	该表面处理可减少产品在运输和储存期间表面产生白锈或黑锈。三价铬钝化处理时，应限制钝化膜中对人体有害的六价铬成分。The treatment can prevent white or black rusts formed on product surfaces during transportation and storage. During Cr3+ passivation treatment, the Cr6+ components in the passivation film that harmful to human body shall be limited
4	无铬耐指纹 Chromium-free anti-fingerprint treatment	AFN	该表面处理可减少产品在运输和储存期间表面产生白锈，可提高电子和电气产品表面的耐汗渍玷污性。无铬耐指纹应限制耐指纹膜中对人体有害的六价铬成分。The treatment can prevent white rusts formed on product surfaces during transportation and storage, and can improve the perspiration of electronic and electrical product surface. Chromium-During chromium free and anti-fingerprint treatment, the Cr6+ components in the passivation film that harmful to human body shall be limited
5	不处理 No treatment	U	该表面处理仅适用于需方订货时明确提出表面不处理的情况，应在合同中注明。表面不处理的产品在运输和储存期间表面较易产生白锈和黑点，需方应慎重选择。This surface treatment is only applied to the buyers when ordering specify surface without treatment, which should be indicated in the contract. No treatment with the surface of the products more easily produce white rust and black spots. Customers should choose carefully.

1.9 相近牌号对照 Reference list of corresponding steel grades

Q/SGJS 0014-2020a	GB/T 2518-2019	EN 10346:2015	VDA 239-100
DD51D+ZM	-	DX51D+ZM	HR0
DD52D+ZM	-	DX52D+ZM	HR2
S220GD+ZM	S220GD	S220GD+ZM	
S250GD+ZM	S250GD	S250GD+ZM	
S280GD+ZM	S280GD	S280GD+ZM	
S300GD+ZM	S300GD	-	
S320GD+ZM	S320GD	S320GD+ZM	
S350GD+ZM	S350GD	S350GD+ZM	
S390GD+ZM	S390GD	S390GD+ZM	
S400GD+ZM	-	-	
S420GD+ZM	S420GD	S420GD+ZM	
S450GD+ZM	S450GD	S450GD+ZM	
S500GD+ZM	-	-	
S550GD+ZM	S550GD	S550GD+ZM	
HD300LAD+ZM	-	HX300LAD+ZM	HR300LA
HD340LAD+ZM	-	HX340LAD+ZM	HR340LA
HD380LAD+ZM	-	HX380LAD+ZM	HR380LA
HD420LAD+ZM	-	HX420LAD+ZM	HR420LA
HD460LAD+ZM	-	HX460LAD+ZM	HR460LA
HD500LAD+ZM	-	HX500LAD+ZM	HR500LA
HD550LAD+ZM	-		HR550LA
HD700LAD+ZM			HR700LA

Q/SGJS 0014-2020a	JIS G 3302:2019
SGHCD	SGHC
SGH340D	SGH340
SGH400D	SGH400
SGH440D	SGH440
SGH490D	SGH490
SGH540D	SGH540

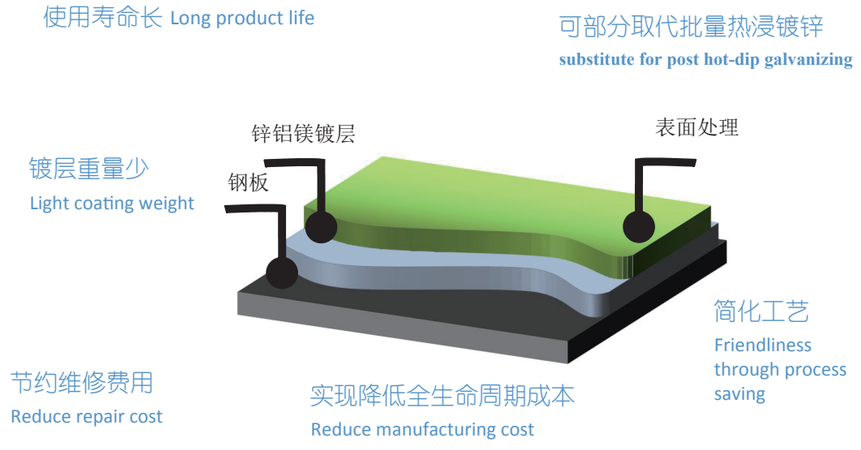
1.10 产品特性 Product features



首钢热基锌 - 铝 (6wt.%)- 镁 (3wt.%) 镀层钢板
SHOUGANG Hot-Dip Zn-Al（6%）-Mg （3%）Alloy Hot-Rolled Steel Sheets

首钢热基锌铝镁合金镀层钢板耐蚀性是同等镀层重量热镀锌（GI）产品的 3 倍以上，具有良好的切口耐蚀性，可以部分取代成形后加工再热浸镀锌的钢板。

In terms of corrosion resistance，SHOUGANG hot-dip Zn-Al-Mg alloy hot-rolled steel sheets is 3 times better than hot-dip zinc-coated steel sheets with the same coating weight, and the excellent corrosion resistance is achieved on cut edge. It can be used as a substitute for post hot-dip galvanizing in some ways 。



1.10.1 平面耐蚀性 corrosion resistance of flat sections

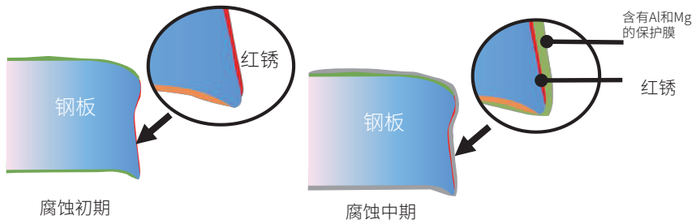
与纯锌（GI）镀层相比，由于锌铝镁镀层中所含的铝（Al）和镁 (Mg) 作用，随着时间推移，在镀层表面形成附着性强的保护膜，抑制镀层的腐蚀，从而发挥优异的耐蚀性。热浸镀锌虽然也在镀层表面形成保护膜，但是该保护膜表面粗糙且附着性低，故腐蚀因子容易穿透，造成镀层腐蚀扩大。

Compared with pure zinc (GI) coating, a protective film with strong adhesion is formed on the coating surface over time due to the action of Al and Mg contained in Zn-Al-Mg coating. The protective film with strong corrosion resistance can inhibit the corrosion of the coating, so as to give play to excellent corrosion resistance. Although hot-dip zinc coating also forms a protective film on the surface, the surface of the protective film is rough and possesses low adhesion. As a consequence, the corrosion factor is easy to penetrate, resulting in the expansion of coating corrosion.

1.10.2 切口耐蚀性 corrosion resistance of cut edge

钢板的切口端面暴露的基体在空气中由于雨水等原因容易发生氧化生红锈。在切口断面部位，从镀层析出的 Al、Mg 元素会在端口部位生成致密的锌系保护膜，并覆盖断口部位，从而发挥优异的耐蚀性。

The exposed cut edge of substrate is oxidized due to rain，condensation，etc。Excellent corrosion resistance is achieved on cut edge parts by covering the ends with a fine zinc-based protective film that contains Al and Mg leaching from the coating layer。

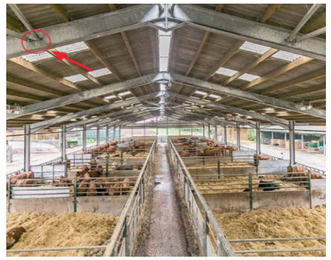


1.11 典型应用 Typical applications

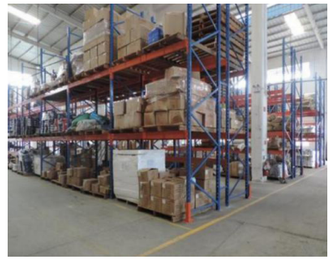

光伏支架 Solar Stent


钢板仓 Steel Silo


公路护栏 Guard Rail


养殖设备 Animal Production Equipment


电器柜 Electric Box


仓储货架 Storage Rack

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上海首钢钢铁贸易有限公司
Shanghai Shougang Steel Trading Co. Ltd.
电话：021-50930789
传真：021-50931008

天津首钢钢铁贸易有限公司
Tianjin Shougang Steel Trade Co., Ltd.
电话： 022-84914552
传真： 022-84918191

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传真：020-22123691

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Wuhan Shougang Steel Trade Co., Ltd.
电话：027-59710209
传真：027-59710258

山东首钢钢铁贸易有限公司
Shandong Shougang Steel Trade Co., Ltd.
电话：0532-80667080
传真：0532-80667087

中国首钢印度有限公司
China Shougang India Private Limited
Tel: 0091 124 4100380/1
Tax: 0091 124 4100381

首钢国际 (马来西亚) 有限公司
Shougang International(Malaysia)SDN.BHD.
Tel: 0060 03 33778968/8972
Tax: 0060 03 33920293

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Tel: 0065 62251706
Tax: 0065 62252617

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Tax: 0082 517459117

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Tel: 0043 1 802 1995 10
Tax: 0043 1 802 1995 50

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Shougang International(Hong Kong) Investment Limited
Tel: 00852- 28910011
Tax: 00852- 28910011

首钢国际 (加拿大) 投资有限公司
Shougang International(Canada)Investment LTD.
Tel: 001 6046970128
Tax: 001 6046970113

卓航海运 (新加坡) 有限公司
Superior Ocean Shipping(Singapope)PTE.LTD.
Tel: 0065-62251706
Tax: 0065-62252617

首钢鹏龙钢材有限公司
电话：010-81470116

佛山首钢中金钢材加工配送有限公司
电话：0757-81861600

苏州首钢钢材加工配送有限公司
电话：0512-53995377

首钢（青岛）钢业有限公司
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