

ISO9001 國際品質認證
毅承股份有限公司

專營熱浸鍍鋅、鐵合金鋼材、不銹鋼等材料供應

YE CHIME CO.,LTD

GA材 國際標準規範：

- ※ JIS 規格 (JIS G3302)：日本熱浸鍍鋅鋼板及鋼捲規範。
- ※ JFS 規格 (JFS A3011)：亞洲汽車用合金化熱浸鍍鋅鋼板及鋼捲規範。
- ※ ASTM 規格 (ASTM A653)：美國汽車用合金化熱浸鍍鋅鋼板及鋼捲規範。

GA Coil/Sheet - International Standard:

- ※ JIS Standard (JIS G3302): Japan Standard Hot-Dip Galvanized Steel
- ※ JFS Standard (JFS A3011): Asia Automobile Alloy Standard Hot-Dip Galvanized Steel
- ※ ASTM Standard (ASTM A653): U.S.A. Automobile Alloy Standard Hot-Dip Galvanized Steel

製 造 流 程

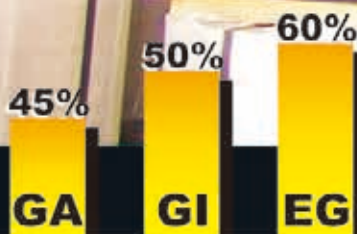
Production Processes



金蟬銳變為重生
 協助企業在
 效率上、
 品質上、
 成本上、
 銳變金屬材料

**蛻
變**





成本
COST

MILL
75天
煉鋼廠

30天

YC




品質
QUALITY

效率
EFFICIENCY

效率

品質



In this high velocity competitive century, manufactures cost support enterprises by three major key elements, cost, efficiency, and quality. Even though it's a well known principle, but real execution is difficult. Your competitiveness is our management focal point. Through ourselves expectation and urge, our major goal and hope is to supply you the most competitive material. Continuously upgrading our various internal technology and potency, we believe that it is time for you to depend on us and give us a chance. Please contact our sales department and you will have an unexpected harvest. It is also the beginning of having a capable partner.

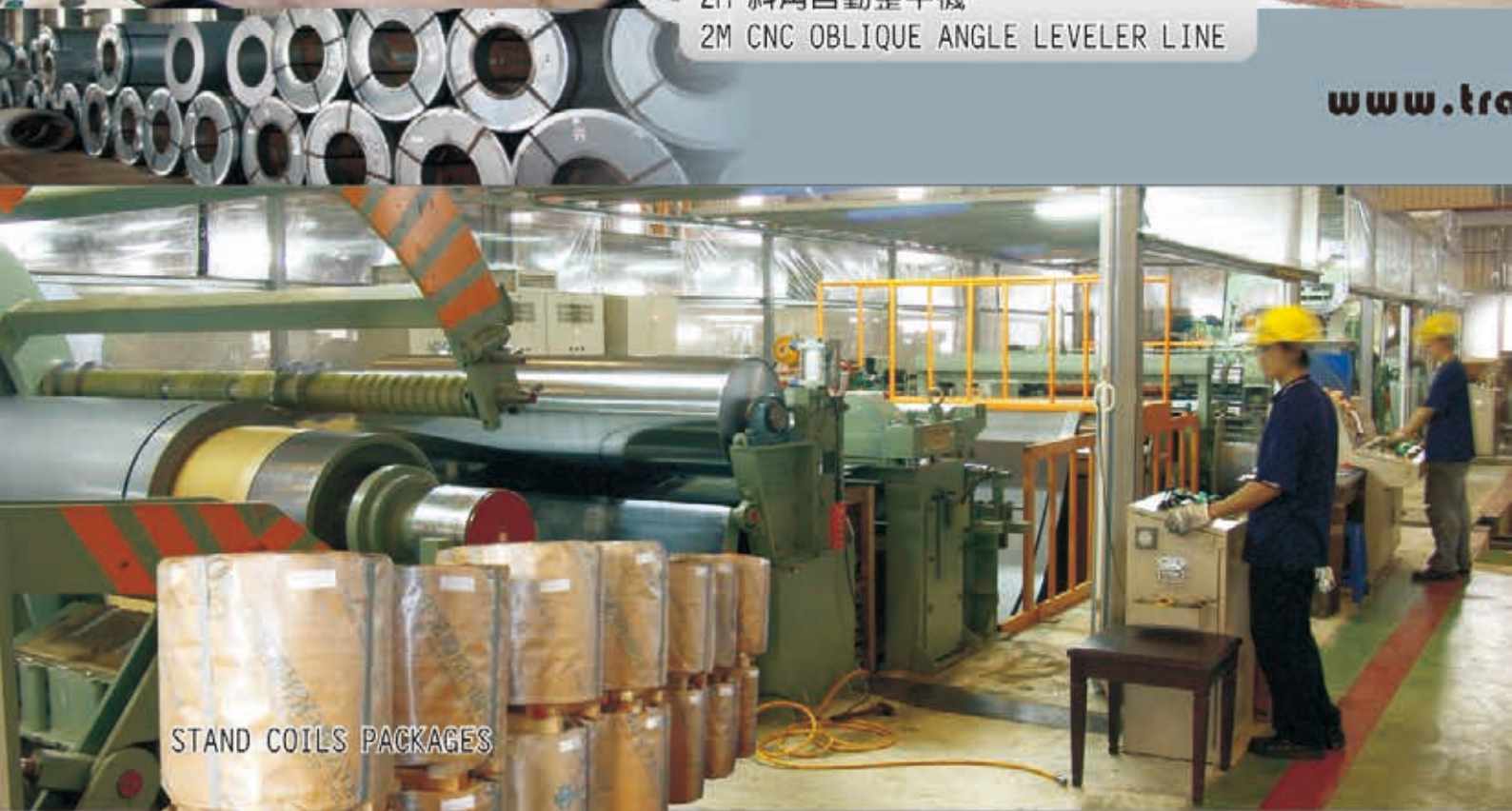
競爭十倍速的時代裡，企業所賴以維生的製造生產之成本、效率、品質是為最重要的三要素，道理雖然人人知道，但是實際的執行上，卻有著許多實行上的困難，您的競爭力卻是我們心裡一向最重視的經營重點，一直以來，透過我們自我的期許與鞭策，提供您最需要最有競爭力的材料供應，就是我們最大的目標與希望，透過許多內部的技術與效能上的不斷要求，我們深信現在就是您體驗這份助力的時候了，請給您我一個機會，連絡我們的業務窗口，您將會有意外的收穫，也是您事業上多一得力夥伴的開始。



STANDARD SHEETS PACKAGES

2M 斜角自動整平機
2M CNC OBLIQUE ANGLE LEVELER LINE

www.tro



STAND COILS PACKAGES

European Union has enforced three major electronic & electrical equipments environment protection regulation WEEE, ROHS, and EUP since July,2006. Ye Chime Co., Ltd supply hexavalent chromium free material for three major industries, automobile, home appliance, and construction. GA material is recyclable, non pollution and non hazardous substances, We continuously offer high quality and low cost material in order to increase industry's competitiveness.

TRAPEZOID PACKAGES



o.com

2M 雙刀座分條機
2M 2 BLADE STAND SLITTER LINE



HORIZONTAL PACKAGE

歐盟於2006年7月起、對電子、電器產品
 實施WEEE、ROHS、EUP三大環保指令。
 毅承公司提供無六價鉻鍍面鋼材
 使用於汽車、家電、建材三大產業。
 可回收循環使用、無環境污染、無毒害。
 持續提供高品質低成本GA鋼材，增加產業競爭力。

GA鋼材之使用範例：

汽車鈹金及零配件

汽車鈹金的重點在成形性及強度、塗裝後之耐蝕性

A. 成形性方面：

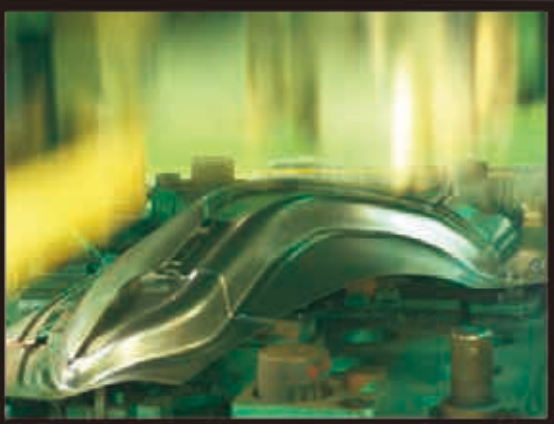
GA表面硬度較硬，摩擦係數低，
因此可作高成形度加工及自動連續沖壓之產品。

B. 成形後之強度方面：

GA材有生產高張力分為軟鋼高張力、硬鋼高張力（亦稱烘烤硬化型鋼片）
可以彌補軟鋼成形後張力不足之缺陷。

C. 塗裝後之耐蝕性方面：

GA為所有表面處理鋼片，塗裝後之耐蝕性最優良之鋼板，
有很多廠商因不鏽鋼430材料太昂貴，而使用GA材，因GA材塗裝後之耐蝕性與不鏽鋼430類似，
GA材因具有良好之加工性、塗裝耐蝕性，因而成為全世界汽車工業使用最多之表面處理鋼板。





The application of GA materials:
Auto press and accessories:

The features of auto press are emphasizing their forming, strength and corrosion-resistance after painting.

A. Forming

The hard surface of GA materials can lower the stamping friction, it is suitable for making products of high-forming and automatic mould stamping .

B. Strength after forming

The GA high strength materials include mild steel high strength and hard high strength (another name - Baking harden steel) those can improve the tension strength in mild steel after forming.

C. Corrosion-resistance after painting

GA is the best in all kinds of coating steel due the excellent corrosion-resistance after painting. So many manufacturers rather choose to use GA instead of T-430 stainless steel because GA has comparable corrosion resistance after painting against T-430 stainless steel. GA is very popular steel in the automobile manufacturing industry because its excellent forming and corrosion resistance after painting .

Microwave Panel
微波爐外殼



Switch Box Panel
機箱外殼



乾衣機外殼
Dryer Machine Panel



DISH ANTENNA
衛星天線



烘碗機外殼
Dish Dryer Panel



洗衣機外殼
Washing Machine Panel



冷氣機外殼
A/C Panel

家電產品的重點在塗裝之附著性、點焊性：

- A. 塗裝附著性方面：GA材為所有表面處理鋼片，塗裝附著性最優良之鋼片，因為噴塗上漆快速，所以噴塗時需降低電壓，以減少產生火花使塗料瞬間凝固而產生火出口，故噴塗時減少噴粉量，以免上漆快速而造成塗料厚度超過標準。
- B. 點焊性方面：GA材因是鋅鐵合金，有鐵做點焊媒介，故其點焊性是所有表面處理鋼片最優良之鋼片，冷軋板連續點焊壽命10000點以上，GA材為5000點以上，如講究排焊效果之微波爐更加適用此GA材。

家電外殼及零配件：

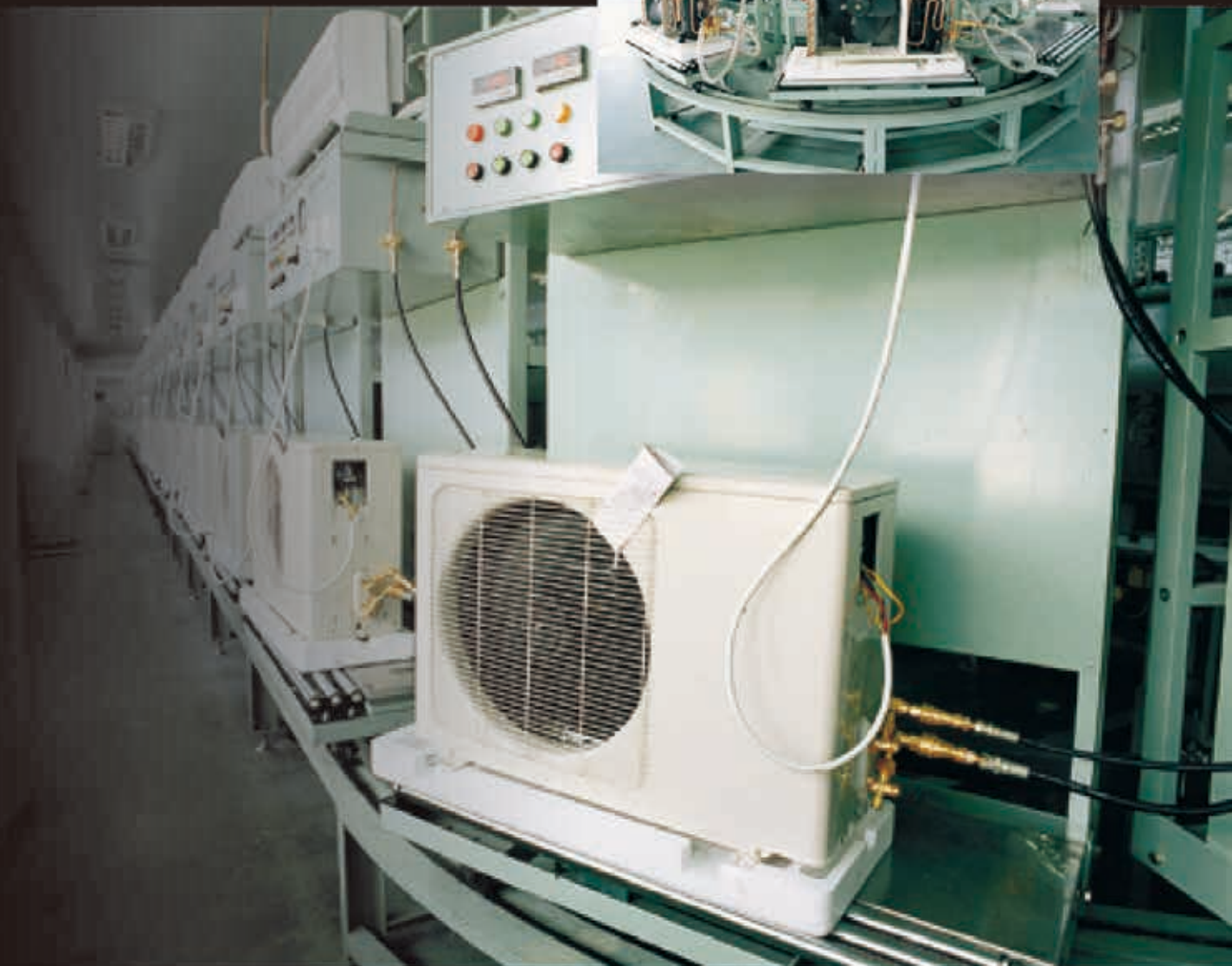
The outdoor case of home appliances and accessories.

The spot welding and painting are the key factors when making home appliances.

A.Painting: GA is the best adhesive steel in all kinds of coating steel in same painting process due can speed painting time and low down voltage to minimum the sparks occurring. This painting process can prevent thicker coating value.

B.Spot welding: GA belongs to zinc & iron alloy coated steel with the iron as welding medium. Therefore, it has the best spot welding properties in all coated steel.

The continuous spot welding life of cold rolled steel is over 10000 spots, and GA is over 5000. Such GA steel is very suitable for making microwave-oven by using seam welding process.



Fire-Proof Doors.

建材產品

建材產品因體積龐大（如防盜門、電器箱）塗裝時較難脫脂與皮膜處理。GA材表面可以做特殊表面處理，表面無油，可以省略脫脂、酸洗、皮膜處理、烘乾...等過程，既省時間又省成本，乃使用GA材者一大福音。部份建材不塗裝，但表面要貼PVC，因GA材的毛細孔是所有表面處理鋼片毛細孔最多之鋼片，所以其表面與膠之黏合度最高。現在生產OA屏風大廠皆由以前使用EG、GI改變使用，GA以增加產品之品質穩定性。



OA屏風 / OA辦公桌
OA partition & Steel Furniture



Construction Products:

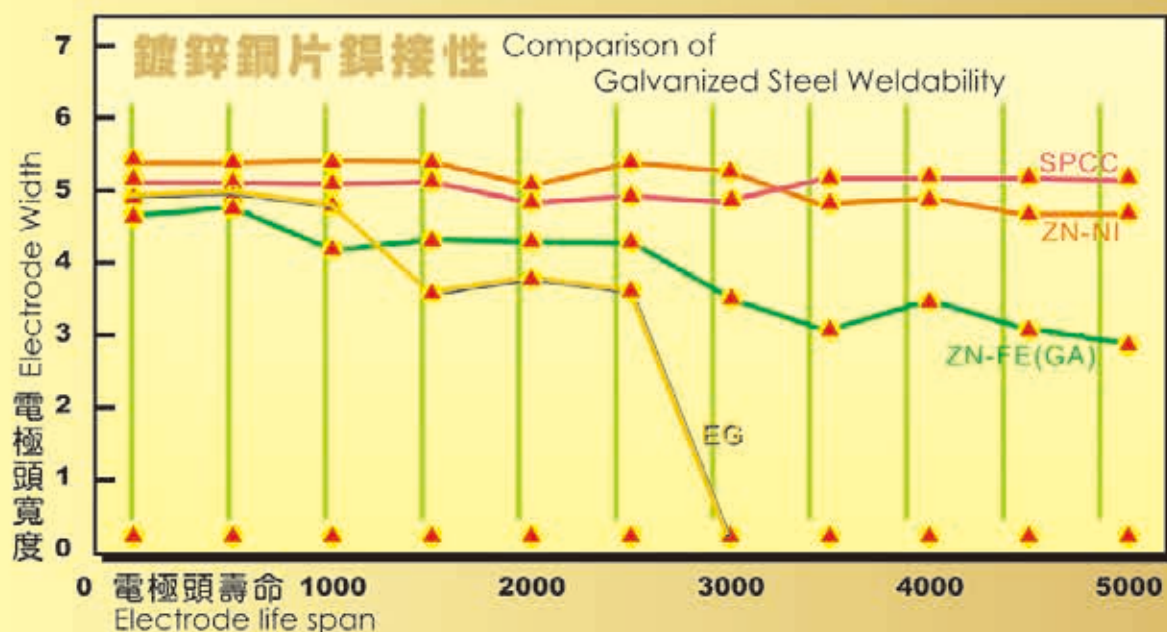
Due to the European environment protection regulation, majority of Galvanized type's steel must Chromium free. Therefore, EG/GI Salt Spray Test has both reduced the hours of corrosion resistance.

GA material originally produced with hexavalent chromium free and after painting it reached 720 hours Salt Spray Test. Due to GA's special alloy surface treatment, it turned out to be the best adhesive steel in all coated steel and even suitable for PVC lamination. There are so many QA partition wall steel furniture manufacturers changed the materials from EG/GI to GA just for the special alloy surface treatment with superior corrosion resistibility.

優越之焊接性

Superior Weldability

鋼片種類	焊接時間 CYCLES	焊接電流 Kamp	電溫壓力 Kgf	接剪強度 Kgf
冷軋鋼片 (SPCC)	8-10	5.5-7.5	230-280	450-500
電氣式鍍鋅 EG20/20	8-10	8.0-9.0	270-320	500-550
熱浸式鋅鐵合金 (GA45/45)	8-10	7.0-10.0	125-200	400-500



■ CO產品一般烤漆之上漆性—外觀

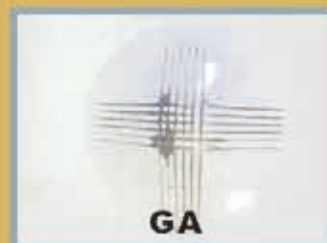
優越塗裝
附著度

壓克力樹脂烤漆
ACRYLIC



Superior Paintability
Paint adhesion

醇酸樹脂烤漆
ALKYD



- 由表一所示純鋅之鍍鋅鋼板 (GI、EG) 鍍層硬度較軟，模具成形後表面很容易因摩擦而刮傷。摩擦係數急速升高產生碎屑黏附在模具上，造成咬模，更嚴重導致部品成形時產生破裂。

表1 各種鍍鋅鋼片的鍍層硬度

鍍鋅鋼片種類	記號	鍍層斷面硬度 Hv 1Kg
電鍍純鋅	EG	54
Zn-Ni合金電鍍鋼片	ZN	325~420
有機塗覆Zn-Ni合金電鍍鋼片	DN	325~420
熱浸純鋅鋼片	GI	74
合金化熱浸鍍鋅鋼片	GA	266~300
雙層合金化熱浸鍍鋅鋼片	FA	342
冷軋鋼片	CR	133

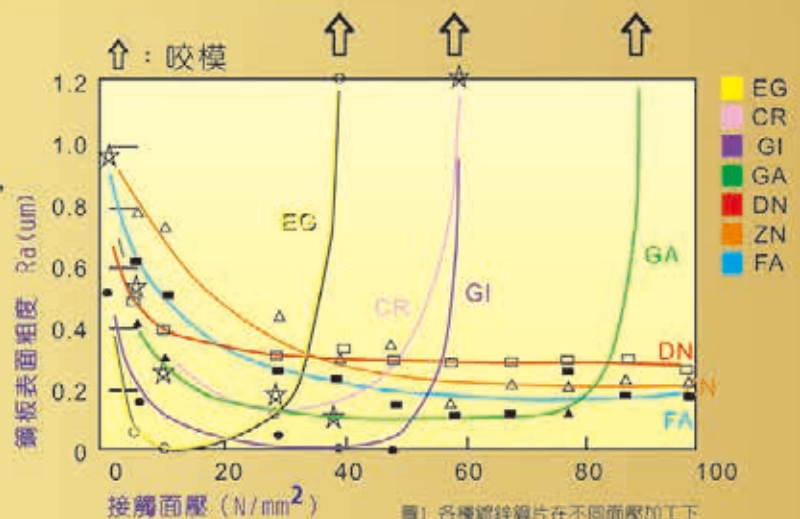
材質介紹簡圖



Superior Process-ability

良好加工性

經過合金化之GA材鍍層表面硬度比CR表面硬，摩擦係數降低（如表一）則較不會咬模及造成成形破裂，因此鍍層較硬之GA材比較適合用於高成形度加工之製品。例如：汽車級金件或深衝型之產品及連續沖壓之產品。



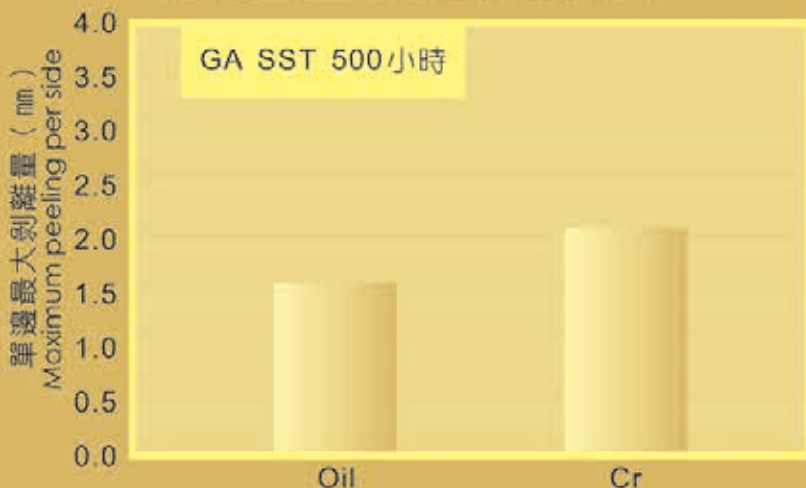
GA與摩擦係數圖

代號	鍍鋅鋼片	粉化及剝離	摩擦係數	連續沖壓穩定性
GA	合金化熱浸鍍鋅	少量粉化	≈CR	穩定
EG	電鍍純鋅	少量粉化	>CR	易黏附模具
GI	熱浸鍍純鋅	少量粉化	≈CR	易黏附模具

Code	Galvanized Steel	Powdering & Peeling	Surface Friction	Auto Mould stamping stability
GA	GAHD-GA (Zinc+Iron Alloy)	minimal	≈CR	Stable
EG	EGElectro-G (Pure Zinc)	minimal	>CR	Prone to Galling
GI	GIHD-GI (Pure Zinc)	minimal	≈CR	Prone to Galling

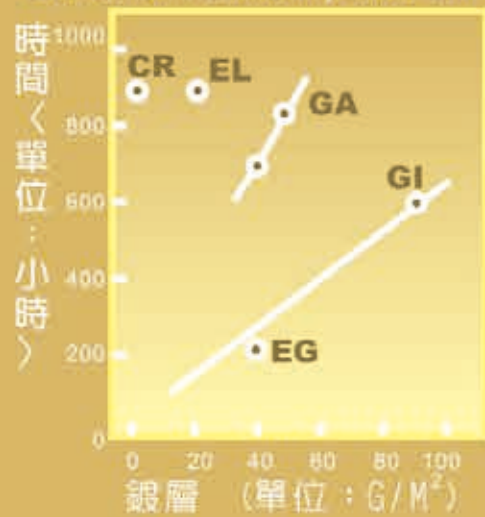
Superior Corrosion Resistance

優越塗裝耐蝕性



ED塗裝後耐蝕性

Corrosion Resistibility after EDP



品質證明與測試報告表

中國鋼鐵
CHINA STEEL

客戶名稱
YK CHIEH CO., LTD.

規格名稱
JFS A3011-98 JAC270C, ALLOYED, ZINC COATING MASS: 45/45, UNTREATED, OILED, UE.

廠牌
CSC MILL INSPECTION

項目	產品序號	尺寸 THICK	厚度 #378	規格 LARGE	重量 KGS	爐號 HEAT NO.	鋼捲號碼 COIL NO.
001	J199094	0.940	1219	CO11	7.54	86732	869745
002	J199095	-	-	-	7.24	86732	865745
003	J199096	-	-	-	7.55	86732	865745

SPECIFICATION

中國鋼鐵
CHINA STEEL

品質證明書
TEST CERTIFICATE

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SPECIFICATION

TEST RESULTS

TESTER: YK

ISO 9001 國際品質認證



中國鋼鐵
CHINA STEEL CORPORATION

Hazardous Substances Chemical Contents Declaration & Warranty

We hereby declare that CSC guarantees the contents of hazardous substances listed below in the following captioned product and steel, as shown in the table.

Product Name: **HDO CR-Coil**
Grade: **S55C / PH 55C**

Substance	Content
(1) Lead and its compounds	ND
(2) Mercury and its compounds	ND
(3) Hexavalent Chromium compounds	ND
(4) Polychlorinated Biphenyls (PCBs)	ND
(5) Polycyclic Aromatic Hydrocarbons (PAHs)	ND

Remarks: 1. The substance in the table are specified as prohibitive substance (Restriction of the use of Certain Hazardous Substances) in all content of lead + mercury + hexavalent chromium + polychlorinated biphenyls (PCBs) + polycyclic aromatic hydrocarbons (PAHs) is restricted to 1000 ppm while 100 ppm for cadmium content.
2. N.D. = Not detected (Less than 2 ppm, detected low limit = ppm x 0.1)

SGS

Test Report
No. KQ00710016 Date: 2007/12 Page 1 of 4

YE CHIME CO., LTD
NO. 228 LINDING STREET, RENYI VILLAGE, RENDE SHANG, TAINAN HSIEN, 71142
TAINAN, R.O.C.

The following commodity was submitted and identified by/on behalf of the client as:

Sample Description: GALVANNEAL ZINC AND IRON ALLOY COATED STEEL SHEET
Specification No.: J003302 JFS A3011 ASTM/AISI S1042 ZF
Sample Receiving Date: 2007/11/08
Testing Period: 2007/11/08 TO 2007/11/12

Test Requested: In accordance with the RoHS Directive 2002/95/EC, and its amendment measures

Test Method:

- With reference to BS EN 1521:2001, Method B for Cadmium Content. Analysis was performed by ICP-AES.
- With reference to US EPA Method 3050B for Lead Content. Analysis was performed by ICP-AES.
- With reference to US EPA Method 8210 for Mercury Content. Analysis was performed by ICP-AES.
- With reference to ISO 9221, Ed. 1 (11/54/2001), Determination of Hexavalent Chromium for metallic samples by Spot test / Colorimetric Method.
- With reference to US EPA 8210C for PCBs/PCDDs Content. Analysis was performed by GC/MS.

Test Results: Please refer to test report.

Katherine Hsu / Supervisor
Signed For and on behalf of
SGS Taiwan Limited

SGS

Test Report
No. KQ00710016 Date: 2007/12 Page 2 of 4

YE CHIME CO., LTD
NO. 228 LINDING STREET, RENYI VILLAGE, RENDE SHANG, TAINAN HSIEN, 71142
TAINAN, R.O.C.

Test results by chemical method (Unit: mg/kg):

Test Item (I)	Method (Refer to)	Result	MDL
Cadmium (Cd)	(1)	0.0	2
Lead (Pb)	(2)	0.0	2
Mercury (Hg)	(3)	0.0	2
Hexavalent Chromium (CrVI) by Spot test / Testing with restriction	(4)	Negative	See Note 5
Sum of PBBs		0.0	-
Monobromobiphenyl		0.0	5
Dibromobiphenyl		0.0	5
Tribromobiphenyl		0.0	5
Tetra bromobiphenyl		0.0	5
Pentabromobiphenyl		0.0	5
Hexabromobiphenyl		0.0	5
Heptabromobiphenyl		0.0	5
Octabromobiphenyl		0.0	5
Nonabromobiphenyl		0.0	5
Decabromobiphenyl		0.0	5
Sum of PBDEs (Mono to Deca)		0.0	-
Monobromodiphenyl ether		0.0	5
Dibromodiphenyl ether		0.0	5
Tribromodiphenyl ether		0.0	5
Tetra bromodiphenyl ether		0.0	5
Pentabromodiphenyl ether		0.0	5
Hexabromodiphenyl ether		0.0	5
Heptabromodiphenyl ether		0.0	5
Octabromodiphenyl ether		0.0	5
Nonabromodiphenyl ether		0.0	5
Decabromodiphenyl ether		0.0	5
Sum of PBDEs (Mono to Deca)		0.0	5

TEST PART DESCRIPTION: SILVER METAL



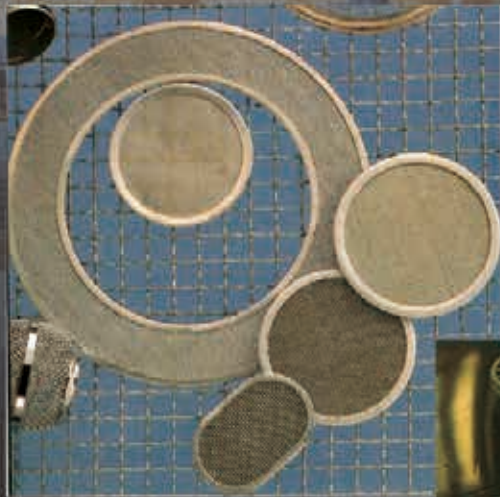
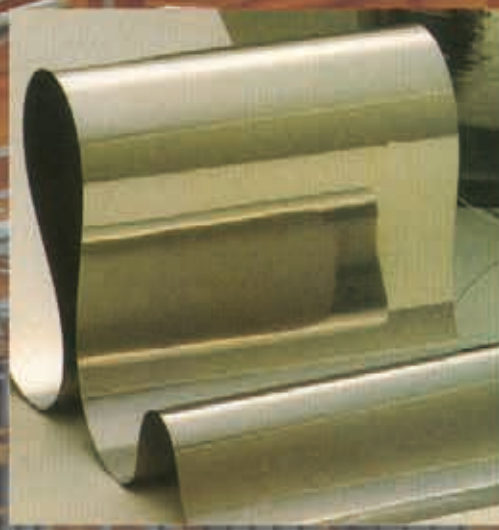
LABORATORY INSTRUMENT
HARDNESS TESTER
TENSILE STRENGTH TESTER
ELONGATION TESTER
YIELD TESTER



依鋼種材質區分（依號內為CSC品質代號）

鋼種類別	JIS G3302	JFS A3011	ASTM A653/653M
軟鋼	SGCC (CQ1J/CQSJ)	JAC270C(CQ1J/CQSJ)	CS TYPE A/B/C (CQ1J/CQSJ)
	SGCD1 (CF1J)	JAC270D(CF1J/CF2J)	FS TYPE A/B (CF1J/CF2J)
	SGCD2 (CF2J)		
	SGCD3 (CF3J)	JAC270E(CF3J)	DDS (CF3J)
	EDDQ (CF4J)	JAC270F(CF4J)	EDDS (CF4J)
烘烤硬化型鋼		JAC270H(CHBJ)	
		JAC340H(CHDJ)	
高深衝型鋼		JAC340P(CPDJ)	
		JAC390P(CPFJ)	
		JAC440P(CPHJ)	
一般用鋼 (結構用鋼)	SGC340 (CSDJ)	JAC340W(CWDJ)	
	SGC400(CSGJ)	JAC390W(CWFJ)	
	SGC440(CSHJ)	JAC440W(CWHJ)	SS50 (CSHJ)
高降伏比型鋼	SGC490(CSHJ)	JAC440R(CRHJ)	
	SGC570(CSNJ)	JAC590R(CRPJ)	

不銹鋼材運用實例





自動CNC整平機設備
LEVELER CNC LINE



分條機設備
SLITTER LINE



飛剪整平機設備 ROTARY SHEARING LINE

Managerial Philosophy

Thanks to computerization and convenient transportation, a true "global village" is gradually taking shape. Furthermore, the standard of living is rising and environmental consciousness is becoming widely accepted. Our company is keeping pace with a changing world by introducing, importing, exporting, and processing materials that meet today's needs. We always uphold a customer service outlook of "Putting others first." Our trustworthy business practices are helping us gradually expand from Taiwan to the international market.

In order to better serve our customers, we emphasize "cost, quality, and efficiency." We know that our sales will grow as our quality continues to improve. We hope that our friends throughout the industry will be generous with their advice, and we hope our customers lend us their support so that we can build a more prosperous future together.

經營者理念

交通、資訊的便捷，地球村逐漸形成，生活水平的提高、環境保護意識高漲，為適應當前環境潮流，本公司致力於符合當前產業材料的介紹，進、出口及剪裁買賣。在服務客戶過程中，本公司一直秉持著“利他主義”信念，由點而面，由國內而國外，一步一腳印，誠信作為。為服務客戶，本公司強調“成本·品質·效率”，由質的提昇進而量的增加，希望同業先進不吝指教及用戶的支持共創美麗前景。



熱浸鍍鋅板重量對照表

kg/m²

厚度mm \ 鍍鋅量符號	Z06 045	Z08 060 030 / 090	Z10 030/120 060/090	Z12 090 030/150 060/120	060/150	Z18 120 090/150 060/180	Z20	Z22	Z25	Z27
0.25	2.053	2.083	2.113	2.146	2.173	2.207	2.248	2.268	2.268	2.344
0.27	2.210	2.240	2.270	2.303	2.330	2.364	2.405	2.425	2.425	2.501
0.30	2.445	2.475	2.505	2.538	2.565	2.599	2.640	2.660	2.660	2.736
0.35	2.838	2.868	2.898	2.931	2.958	2.992	3.033	3.053	3.053	3.129
0.40	3.230	3.260	3.290	3.323	3.350	3.384	3.425	3.445	3.445	3.521
0.50	4.015	4.045	4.075	4.108	4.135	4.169	4.210	4.230	4.230	4.306
0.60	4.800	4.830	4.860	4.893	4.920	4.954	4.995	5.015	5.015	5.091
0.70	5.585	5.615	5.645	5.678	5.705	5.739	5.780	5.800	5.800	5.876
0.80	6.370	6.400	6.430	6.463	6.490	6.524	6.565	6.585	6.585	6.661
0.90	7.155	7.185	7.215	7.284	7.275	7.309	7.350	7.370	7.370	7.446
1.0	7.940	7.970	8.000	8.033	8.060	8.094	8.135	8.155	8.155	8.231
1.2	9.510	9.540	9.570	9.603	9.630	9.664	9.705	9.725	9.725	9.801
1.4	11.08	11.11	11.14	11.17	11.20	11.23	11.28	11.30	11.30	11.37
1.6	12.65	12.68	12.71	12.74	12.77	12.80	12.85	12.87	12.87	12.94
1.8	14.22	14.25	14.28	14.31	14.34	14.37	14.42	14.44	14.44	14.51
2.0	15.79	15.82	15.85	15.88	15.91	15.94	15.99	16.01	16.01	16.08
2.3	18.15	18.18	18.12	18.24	18.27	18.30	18.34	18.36	18.36	18.44
2.8	22.07	22.10	22.13	22.16	22.19	22.22	22.27	22.29	22.29	22.36
3.2	25.21	25.24	25.27	25.30	25.33	25.36	25.41	25.43	25.43	25.50
3.6	28.35	28.38	28.41	28.44	28.47	28.50	28.55	28.57	28.57	28.64
4.0	31.49	31.52	31.55	31.58	31.61	31.64	31.69	31.71	31.71	31.78
4.5	35.42	35.45	35.48	35.51	35.54	35.57	35.61	35.63	35.63	35.71
6.0	47.19	47.22	47.25	47.28	47.31	47.34	47.39	47.41	47.41	47.48

備註：1、底材重量：7.85 (kg/m²) × 厚度 (mm)

2、鍍鋅板重量：底材重量 (kg/m²) + 鍍鋅層重量

鍍鋅層重量對照表

鍍鋅量符號	Z06 045	Z08 060 030 / 090	Z10 030/120 060/090	Z12 090 030/150 060/120	060/150	Z18 120 090/150 060/180	Z20	Z22	Z25	Z27
鍍層重量kg/m ²	0.090	0.120	0.150	0.183	0.210	0.244	0.285	0.305	0.305	0.381

ISO9001 國際品質認證

毅承股份有限公司

專營熱浸鍍鋅、鍍鋅鋼材、不銹鋼等材料供應

YE CHIME CO.,LTD

DBU COMPANY

- ▶ 毅承股份有限公司
YE CHIME CO., LTD.
臺灣省台南市仁德區仁義里林頂街339號
No.339, Linding St., Renyi Village,
Rende Shiang, Tainan Hsien 71742,
Taiwan
TEL: 886-6-2791686
FAX: 886-6-2797138/2793232
E-mail: service@yechime.com
URL: www.yechime.com
- ▶ 中國大陸華東地區聯絡人
SOUTH EASTERN CHINA
吳怡世
Mobile: 86-13951513098
- ▶ 毅承(泰國)有限公司
YE CHIME(THAILAND)CO., LTD.
339 Moo 1 T.Bokwangthong A.Bothong
Chonburi 20270 Thailand
Tel:038-196281
Fax:038-196282

