SOREX®
The Professional Quality

首銳銲材工業股份有限公司

Welding
Global Link Local

SOREX®
The Professional Quality

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Content

目錄

Company profile
企業簡介

Enterprise Spirit 企業精神

Consist of Ambition, Innovation and Execution in the core spirits the company has positively researched and implemented within their hi-quality-belief attitudes in the whole processes. Go through the 40s-year experience in the production and development the company has met the industries and demands in the international standards, that of being approved and certified. Offering the best products and service has never ever changed in Sorex as an eternal target it follows.

首銳銲材秉持『企圖心、創造力、執行力』的企業精神，展現公司積極進取、創新研究、貫徹執行的工作態度。透過 40 多年來研發能量的累積，與國際市場上，多元的客製化產品經驗，為所有客戶提供最完善的產品與服務。

Management Concept 經營理念

Insist in diligent, practical and excellent quality management. Sorex concerns on every products process and practical company policy to meet customer demand. To meet customer expect is our major principle. We expect to provide high quality products, reasonable price and professional service in the market.

堅守『勤勞踏實、團隊創新、卓越品質』的經營理念，審慎管控生產流程與產品品質，實踐公司理念與政策，以達符合客戶需求，並以「超越客戶所期待」列為最高指導原則，期盼精益求精，提供市場高品質、合理價格與優質服務的全方位產品。

Enterprise Spirit 環境保護

SOREX Welding is aware of environmental-protection. Between natural and human culture relationship we also care about individual eco protect policy. We devoted ourselves to the enviormental friendly process and invest equipments for waste water and dust collection system. SOREX as the 1st ISO 14001 and OHSAS 18001 certificated and now ISO45001 certificated in 2018 of Taiwan welding manufacture. Through this process, we also maintain green area near by 11,600 m2.

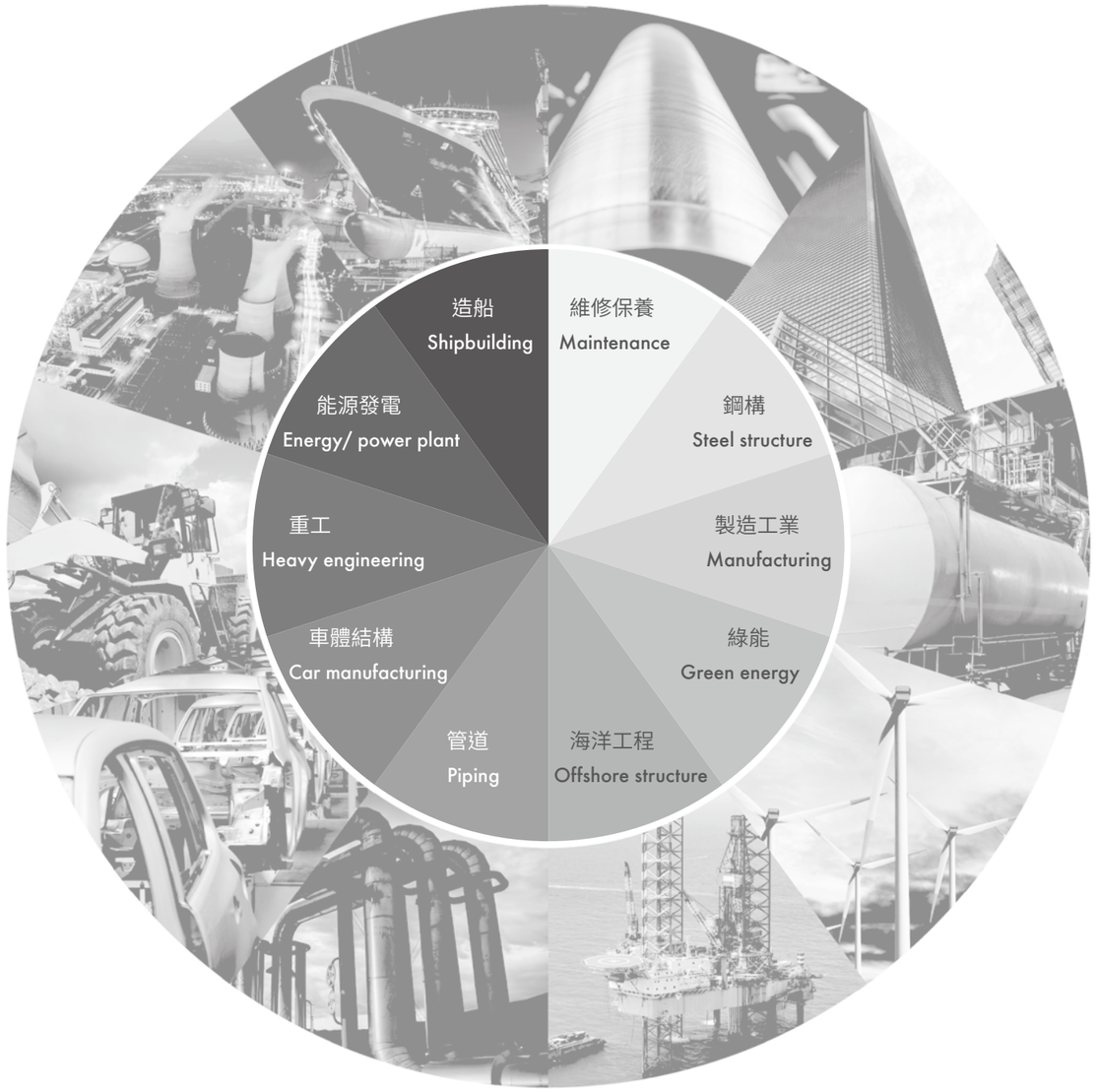
首銳銲材，在企業發展與環境保護當中追求平衡，敬重大自然與人文的關係，將環保綠能列為經營方針，廠區內設置集塵設備、汙水處理設施。2016 年成為首家通過 ohsas 18001 認證的銲材製造商，2018 年提前轉版為 ISO45001 認證，並同時獲得 ISO 14001 等其他相關認證。在廠區內保留近 3500 坪的綠地，為環境綠化善盡心意。

Enterprise Spirit 品質政策

Professional Quality, Staff Participation, Customer Satisfaction and Continuous Improvement are principles. Our R&D team in Sorex is comprised of the relevant majors in material and chemical experts and engineers of mechanical, automation, chemistry and materials. They were research and development for high-end products development to meet customer's demand. In order to meet the target and beyond international standard, those quality control principle were based on ISO 9001 quality management system and world shipping classification society.

以『專業品質、全員參與、客戶滿意、持續改善』為主軸，追求品質工藝。延攬日籍產品研發顧問，以及國內外機械、電機、化學、材料等專業領域人才，進行高品質產品開發，迅速對應客戶特殊需求研發新產品，並依循 ISO 9001 品質管理系統，及世界各國驗船協會的認證標準，作為管控生產品質的基本原則，以符合與超越相關國際規範為研發目標。

Applications for Market segments
產品應用領域



Shipbuilding 造船

Features 產品特色：

We provide welding wire and electrode with low fume, applicable to Zinc primer steel, crack resistance, with superior ductile performance at low temperature impact strength. Approvals available are ABS, BV, CCS, CR, DNV-GL, KR, LR, NK, RINA could meet various requirements of welding different vessels.
提供低煙霧、耐鋅粉底漆、抗龜裂性、低溫韌性要求的造船用銲條及銲線，並通過多家船級認證 (ABS，BV，CCS，CR，DNV-GL，KR，LR，NK，RINA) 要求的銲材，以滿足各類船體結構銲接之要求。

Welding electrodes recommended 推薦銲材：

SL-58、SLH-58、SS-308L、SS-309L、SS-316L、SFC-71、SFC-71J、SFC-75、SFC-70C、SFC-308L、SFC-309L、SFC-309MoL、SFC-316L、SFC-317L、SFC-2209、SMG-6、SF-65*SW-M12K、SF-66*SW-M12K

Reference 工程實績 (案例)：

Project name 協力工程	Products adopted 產品使用
CSSC-Yang Ming Marine Transport Corp. 14000TEU container ship 台船 - 陽明海運 14000TEU 貨櫃輪	SFC-71
CSSC-Semi Submersible working vessel 台船 - 新加玻半潛式工作船	SFC-71
L&T MFF- Cluster 8 project	SFC-71

Energy/ power plant 能源發電

Features 產品特色：

Low diffusible hydrogen composition, low impurity, high temperature crack resistance, anti-high temperature creep for different type of power plants applications.
提供低氫含量、低雜質含量、耐高溫龜裂性、耐高溫潛變用的銲條及銲線，以滿足各類型電廠使用之銲接材料。

For Power Plant (coal, heavy oil, Natural Gas) 火力發電用 (燃煤 & 重油 & 天然氣)：

Welding electrodes recommended 推薦銲材：

SR-88B2、SR-98B3、SR-86B6、SR-86B8、SR-96B9、SW-88W2、SS-308H、SS-310、SS-309MoL、SS-317L、SS-410NM、SFC-81B2、SFC-91B3、SFC-81W2、SFC-309MoL、SFC-317L、SFC-410NM、STG-80B2、STG-90B3、STG-80B6、STG-90B9、STG-410NM

For Nuclear Power Plant 核能發電用 Welding electrodes recommended 推薦銲材：

SL-58、SR-88B2、SS-308L、SS-316L、STG-52、STG-308L、STG-316L

Reference 工程實績 (案例)：

Project name 協力工程	Products adopted 產品使用
Taiwan Power Company-Linkou Thermal Power plant expansion plan, Main Generator Turnkey project 台電林口更新擴建計畫主發電機統包工程	SL-50、SS-308L、SFC-71、SFC-81W2、SFC-308L、SFC-309MoL、SFC-316L、STG-50、STG-52、STG-308、STG-316、STG-276、STG-625
Thong Siau Plant 通霄電廠	SW-88W2、SFC-81W2
Main Generator Turnkey Project & Pressure Vessel Project 大林電廠更新改建計畫 Dalin Power Plant expansion 主發電機統包工程 & 鍋爐島區新建工程	SFC-71、SMG-8、SF-65*SW-M12K
Xingda Power Plant-Coal unloading system improvement Project 興達電廠卸煤系統改善計畫	SFC-71、SFC-309L
Xingda Power Plant-Boiler No. 1, 2 improvement & SCR Implant Project 興達一 . 二號機鍋爐性能改善及增設選擇性觸媒還原設備工程	SW-78W1

Heavy Equipment 重工

Features 產品特色：

High deposition rate, high current, good crack resistance, and good weldability electrodes and wires are available to meet demands of big heavy equipment welding.
提供高融填效率、大電流銲接、耐龜裂性、操控性優異的銲條及銲線，以滿足大型重機設備銲接之需求。

Welding electrodes recommended 推薦銲材：

SL-58、SLH-58、SL-56、SL-60、SFC-70C、SFC-71、SFC-81Ni1、SFC-81Ni2、SMG-8、SMG-60

Automotive (car frame) 車體結構

Features 產品特色：

We provide solid wires and metal cored wires with good weldability, low spatters, high efficient for car frame joining such as exhaust pipe & car silencer welding.
提供送線性優異、低噴渣性、高銲接效率之實心與包藥金屬系銲線，以滿足汽車車體結構、汽車排氣系統、汽車消音器銲接之需求。

Welding electrodes recommended 推薦銲材：

SFC-71M、SFC-409Ti、SFC-409Cb、SFC-439Ti、SMG-6、SMG-439Ti

Steel Structure
鋼構

Features 產品特色：

To provide high deposition efficiency, porosity resistance, crack resistance and excellent weldability welding consumables. Sorex made electrodes is widely adopted at steel bridges and structures worldwide.
提供高溶填效率、耐氣孔、耐龜裂性、操控性優異的銲條及銲線，在國內外的鋼結構橋樑及鋼結構大樓所使用的高強度鋼材或超高強度鋼材，都有首銳銲材的應用實績。

Welding electrodes recommended 推薦銲材：

SM-03、SM-13、SM-10、SL-50、SL-56、SL-60、SN-98G、SW-78W1、SW-88W2、SFC-71、SFC-70C、SFC-81N1i、SFC-81W2、SFC-91Ni2、SMG-8、SMG-60、SF-65*SW-M12K、SF-75*SW-M12K、SF-68*SW-60G、SF-78*SW-60G、SFC-721、SF-60*SWE-60G

工程實績 (案例)Reference：

Project name 協力工程	Products adopted 產品使用
Farglory group- The One (O1) building project constructed by CSSC. 遠雄 The One (O1) 鋼結構大樓 (中鋼結構)	SFC-71、SFC-81Ni1、SF-65*SW-M12K、SF-68*SW-60G
CYSCO-Kaohsiung Library 高雄圖書總館 (春源鋼鐵)	SFC-71、SFC-81Ni1
Huanhei Expressway Taipei Urban-Taipei County side Sluice road to Huajiang Bridge project by CSSC 台北都會區環河快速道路台北縣側建設計劃二重疏洪道口至華江橋段工程 (中鋼結構)	SFC-71
Taichung City Government New Building project by JHO 台中市新市政中心市政府大樓新建工程 (皆豪鋼鐵)	SFC-81Ni1
Taiyuan Airport MRT by CSSC, CYSCO 桃園機場聯外捷運 (中鋼結構、春源鋼鐵)	SL-50、SL-60、SS-309L、SFC-71、SFC-70C、SFC-81Ni1、SFC-308L、SF-65*SW-M12K、SF-68*SW-60G
Far Eastern Memorial Hospital Phase 2 project by Tung Ho Steel Enterprise Corp. 亞東紀念醫院第二院區新建工程 (東鋼結構)	SL-50D
Taipei Xinzhuang Fuduxin- Central office building by Tung Ho Steel Enterprise Corp. 台北新莊副都心中央合署辦公大樓 (東鋼結構)	SL-50D、SFC-71、SFC-70C、SF-65*SW-M12K、SF-68*SW-60G
National Road No. 1 Wugu to Yangmei section steel structure bridge expansion by Evergreen Steel Corp. 國道一號五股至楊梅段拓寬工程鋼結構橋樑 (長榮鋼鐵)	SFC-71、SFC-70C、SF-65*SW-M12K
NPAC-Weiwuying Kaohsiung by CYSCO 高雄衛武營文化藝術中心主結構體 (春源鋼鐵)	SFC-71
Kaohsiung Exhibition Center by Evergreen Steel Corp. 高雄世貿中心統包工程 (長榮鋼鐵)	SFC-71、SFC-70C
Taipei Performing Arts Center by CAMPI 台北藝術中心新建工程 (理成工業)	SFC-71
Taozhu building by Evergreen Steel Corp. 陶朱隱園新建工程 (長榮鋼鐵)	SL-50D、SL-60、SFC-71、SFC-81Ni1、SFC-110
Southern Branch of the National Palace Museum by Evergreen Steel Corp. 故宮南院興建計畫 (長榮鋼鐵)	SL-50D、SFC-71

Ocean Engineering
海洋工程

Features 產品特色：

Superior Anti-Hygroscopicity, low diffusible hydrogen composition, excellent impact strength at low temperature, superior crack resistance and wind resistance with good weldability good for offshore structure and drill tower frame welding.
提供耐吸濕性、低氫含量、低溫衝擊性能優異、高耐龜裂性、抗風性強、操控性優異的海洋結構物用銲材，以滿足、鑽油塔架銲接之需求。

Welding electrodes recommended 推薦銲材：

SLH-58、SN-98G、SL-118M、SFC-71J、SFC-91Ni2、SFC-110

Green Energy 綠能

Features 產品特色：

To provide low hydrogen composition, high deposition efficiency and great ductility performance at low temperature is our main purpose of design. ABS, BV, CCS, CR, DNV-GL, KR, LR, NK, RINA shipping class certified and CPR-CE mark approved welding consumables can meet the requirement of structure specification stand for the sea wind and circulation.

提供低氫含量、高溶填效率、低溫韌性要求的銲條及銲線，並通過多家船級認證 (ABS，BV，CCS，CR，DNV-GL，KR，LR，NK，RINA) 與 CPR-CE MARK 認證的銲材，以滿足風力、洋流等綠能發電結構物用之銲材。

Welding electrodes recommended 推薦銲材：

SL-58、SLH-58、SS-309L、SFC-71、SFC-71J、SFC-71M、SFC-81Ni1、SFC-309L、SFC-81M、SFC-81K2、SF-65*SW-M12K、SF-66*SW-H12K、SF-66*SW-60G、SMG-60N、SMG-60

Manufacturing 製造工業

Features 產品特色：

Our welding consumables designed for anti-high temperature oxidation, Corrosion resistance, and providing good ductility and impact strength to meet requirement of food machinery, pressure vessel, and industrial equipment.

提供耐高溫氧化、耐腐蝕性、高強度、高衝擊韌性的銲條及銲線，以滿足食品機械、鍋爐與壓力容器、工業用設備銲接之需求。

Welding electrodes recommended 推薦銲材：

SL-50、SL-58、SR-88B2、SR-98B3、SN-88C1、SN-88C2、SN-88C3、SS-308L、SS-309L、SS-316L、SS-310、SFC-71、SFC-81B2、SFC-91B3、SFC-81Ni2、SFC-81K2、STG-50、STG-80B2、STG-90B3、STG-308L、STG-309L、STG-316L、STG-310、SMG-8、SMG-308L、SMG-309L、SMG-316L、SMG-310、SFC-2209、SFC-2594

Pipeline
管道

Features 產品特色：

We design welding consumables providing low P & S composition, low diffusible hydrogen content, high impact values, low spatters, high penetrations, good wind resistance, good weldability shelf-shield tubular wires for low temperature pipe welding. Especially suits for low temperature piping grade API X70, X80 of LNG pipe line choices.

提供低 P&S、低氫含量、高衝擊性能、低噴渣、溶透深、抗風性強、操控性優異的低溫管道銲接用之自遮護銲線，特別適用於 API X70 低溫管線用鋼、API X80 低溫管線用之銲接用材，以滿足 LNG 輸送管線銲接之需求。

Welding electrodes recommended 推薦銲材：

SC-10、AFL-X70-O、AFR-X80-O

工程實績 (案例)Reference：

Project name 協力工程	Products adopted 產品使用
CPC-Taichung Port LNG storage pipes project Phase 2 中油 - 台中港第二期 LNG 儲槽管道	STG-308L
CPC-Linyuan Plant- 6th naphtha cracking 中油 - 林園第六輕油裂解廠	SFC-71、SL-50、STG-56、SFC-308H SS-309、SS-310
China Petroleum Corp project—中石化	AFL-X70-O、AFR-X80-O
CPC corporation, Taiwan Rifining Business Division Dalin Plant D-HDS project 台灣中油大林 D-HDS 工程	STG-50、SL-50
CPC corporation, Taiwan RFCC project 台灣中油 RFCC 工程	STG-316L、SS-316L
CPC corporation, Taiwan Rifining Business Division Dalin Plant Sulfur Recovery Unit 10th construction project 大林煉油廠第十硫磺工場興建統包工程	STG-50、STG-309L、SS-308 SS-309L、STG-308

Maintenance
維修保養

Features 產品特色：

Sorex design welding electrodes with high corrosion resistance, impact strength, abrasion resistance along with hardness and alloy compositions for the applications of build –up rollers, shovels, gears.

提供適用於耐高溫磨耗性、耐衝擊、耐腐蝕性、高硬度及特殊合金成份之硬面修補用銲材，應用於輥輪再生銲補、斗鏟銲補、齒輪銲補、螺桿銲補、鬼齒銲補、磨煤輪銲補等場合，以滿足鋼鐵廠、礦石場、水泥廠、機械設備廠之設備銲補的需求。

Welding electrodes recommended 推薦銲材：

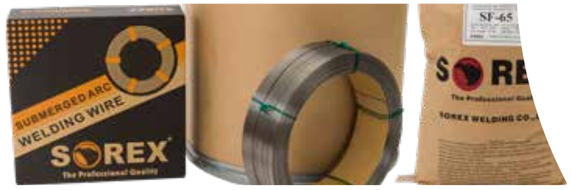
SH-45、SH-45R、SH-80、SH-80R、SH-90、SH-90HS、SH-90HC、SH-90HN、SH-MN、SFH-45G、SFH-58G、SFH-58GM、SFH-59G、SFH-61GM、SFH-63G、SFH-67NMG、SFH-61-O、SFH-67-O、SFH-70-O、SFH-MNG、SFH-22S*SF-82、SFH-42S*SF-80、SFH-53S*SF-80

工程實績 (案例)Reference：

Project name 協力工程	Products adopted 產品使用
CC roller rebuild by CSC 中鋼公司輥輪再生銲補	SFH-42S*SF-80、SFH-22S *SF-82、SFH-53S*SF-80
CC roller rebuild by Dragon steel 中龍公司輥輪再生銲補	SFH-42S*SF-80

Welding consumables

銲材總覽



Synopsis of SOREX welding consumables 首銳銲材產品總覽

- Stick Electrode 被覆銲條
  - Carbon 碳鋼
  - Stainless Steel 不鏽鋼
  - Nickel-Alloy Steel 鎳基合金鋼
  - Low-Alloy Steel 低合金鋼
  - For Cast Iron Welding 鑄鐵用
  - Hard-Facing 硬面耐磨
- Flux Cored Wire 包藥銲線
  - Self-Shielded 自遮護
  - Gas-Shielded 氣遮護
  - Carbon 碳鋼
  - Stainless Steel 不鏽鋼
  - Low-Alloy Steel 低合金鋼
  - Hard-Facing 硬面耐磨
  - Nickel-Alloy Steel 鎳基合金鋼
- Solid Wire 實心銲線
  - Gas-Shielded 氣遮護
  - GTAW 氬弧
  - SAW Flux 潛弧銲藥
  - Carbon 碳鋼
    - Copper Coated 鍍銅
    - Non-Copper Coated 無鍍銅
  - Stainless Steel 不鏽鋼
  - Low-Alloy Steel 低合金鋼
    - Copper Coated 鍍銅
    - Non-Copper Coated 無鍍銅
  - Hard-Facing 硬面耐磨
  - Nickel-Alloy Steel 鎳基合金鋼
- Metal cored wire 金屬粉芯型銲線
  - Gas-Shielded 氣遮護
  - GTAW 氬弧
  - SAW Flux 潛弧銲藥
- Welding Strip 板帶
  - Stainless Steel 不鏽鋼
  - Nickel-Alloy Steel 鎳基合金鋼

Stick Electrode 被覆電銲條
SMAW

Stick Electrode 被覆電銲條
SMAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ **For Mild Steel** 軟鋼被覆電銲條														
SM-03	JIS Z3211 E4303 EN ISO 2560-A E 35 2 RB 1 2	421	474	30	87(0℃)		0.082	0.39	0.18	-	-	-	-	For ships, bridges and general steel structures welding. 船舶、車輛、橋樑、鑄件及一般鋼材建築工程。
SM-10	AWS A5.1 E6019 EN ISO 2560-A E 35 2 RA 1 2	424	467	27	62(-20℃)		0.070	0.46	0.11	-	-	-	-	For vehicles, oil tanks,ships,vessels and other general steel structures welding, plate thickness under 20mm, good X-ray soundness. 船體、鍋爐、車架、油槽、鋼架等用，X-Ray 性能優，母材 20mm 以下為宜。
SC-10	AWS A5.1 E6010 EN ISO 2560-A E 38 3 C 2 1	425	495	28	70(-30℃)		0.120	0.48	0.20	-	-	-	-	Use DC , suits for all position welding of pipes , oil tanks and boilers. 管子、油槽、鍋爐等用直流銲接。
SC-11	AWS A5.1 E6011 EN ISO 2560-A E 38 3 C 1 1	428	498	27	50(-30℃)		0.142	0.26	0.23	-	-	-	-	For all position welding of pipes , oil tanks and boilers. 管子、油槽、鍋爐等用交直流銲接。
SM-13	AWS A5.1 E6013 EN ISO 2560-A E 38 0 R 1 2	422	468	26	65(0℃)		0.058	0.29	0.20	-	-	-	-	For vehicles , steel and other light structures welding. 鍋爐、鋼架結構工程。
SM-26	JIS Z3211 E4340	422	483	29	81(0℃)		0.060	0.35	0.17	-	-	-	-	For ships, bridges, buildings and general steel structures welding. 鋼架結構工程。
☐ **For Groove** 開槽用被覆電銲條														
SGCP	-	-	-	-	-		-	-	-	-	-	-	-	For cutting, gouging and grooving stainless steel, cast iron, copper and its alloys. 鋼鐵、鑄鐵、不銹鋼、銅合金、和各種合金鋼之開角、開槽、切斷、穿孔等作業。
☐ **For 490N/mm^2 High Tensile Steel** 490N/mm^2 級高張力鋼被覆電銲條														
SL-24	AWS A5.1 E7024	470	525	24	49(-20℃)		0.090	0.75	0.33	-	-	-	-	High deposition efficiency 160%, suits for flat/ horizontal positional welding. 高熔填率 160%，平銲及水平角銲用。
SL-241	AWS A5.1 E7024	470	535	23	65(0℃)		0.080	0.52	0.29	-	-	-	-	Suits for thin to middle thickness plats at fillet welding. 適合於薄中板及角銲用。
SL-50	AWS A5.1 E7016 EN ISO 2560-A E 42 3 B 1 2	496	564	30	168(-30℃)		0.080	0.89	0.26	-	-	-	-	For 490N/mm^2 high tensile steels in ships, bridges, buildings, pressure vessels and general steel structures welding. 490N/mm^2 級高張力鋼及鑄鋼件。
SL-50D	AWS A5.1 E7048 EN ISO 2560-A E 42 3 B 3 1	490	560	29	87(-30℃)		0.090	0.86	0.27	-	-	-	-	For shipbuilding, bridges and steel structures welding. 造船、橋樑、建築等銲接場合。
SL-50R	AWS A5.1 E7016 EN ISO 2560-A E 42 3 B 1 2	481	554	29	63(-30℃)		0.060	0.72	0.27	-	-	-	-	For shipbuilding, bridges and steel structures welding. 造船、橋樑、建築等銲接場合。
SL-56	AWS A5.1 E7028 EN ISO 2560-A E 42 2 B 5 4	518	570	27	48(-20℃)		0.090	1.22	0.21	-	-	-	-	High deposition efficiency 140% , suits for gravity welding. 高熔填率 140%，平銲及水平角銲或重力三角架。
SL-58	AWS A5.1 E7018 EN ISO 2560-A E 42 3 B 3 2	518	604	28	156(-30℃)		0.070	1.38	0.47	-	-	-	-	For 490N/mm^2 H.T. steel of nuclear power station , petroleum chemical plants and heavy steel structures welding. 490N/mm^2 級高張力鋼、核能電廠、石油化學工業等。
SL-58M	AWS A5.1 E7018M EN ISO 2560-A E 42 3 B 3 2	472	540	30	168(-30℃)		0.070	1.20	0.23	-	-	-	-	For 490N/mm^2 H.T. steel welding , excellent impact value at -30℃ . 490N/mm^2 級高張力鋼等，低溫衝擊性能優。
SLH-58	AWS A5.1 E7018-1 H4 EN ISO 2560-A E 46 4 B 3 2 H5	525	585	29	102(-45℃)		0.062	1.25	0.49	-	-	-	-	For 490N/mm^2 H.T. steel welding , excellent impact value at -45℃ . 490N/mm^2 級高張力鋼等，低溫衝擊性能優。

Stick Electrode 被覆電銲條
SMAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm²)	T.S.(N/mm²)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ For ≧ 550N/mm² High Tensile Stee ≧ 550N/mm² 級高張力鋼被覆電銲條														
SL-60	AWS A5.5 E8016-G EN ISO 2560-A E 46 3 B 3 2	539	637	29	108(-30℃)		0.081	1.27	0.39	-	-	-	-	For 550N/mm² H.T. steel welding , excellent impact value at -30℃ . 550N/mm² 級高張力鋼等，低溫衝擊性能優。
SL-63	AWS A5.5 E8013-G	482	570	22	46(-20℃)		0.080	0.62	0.32	-	-	-	Cu:0.32	For 550N/mm² H.T. steel welding. 550N/mm² 級高張力鋼等。
SL-80	AWS A5.5 E9016-G EN ISO 18275-A E 55 3 B 1 2	590	705	24	78(-30℃)		0.110	1.15	0.43	0.77	-	0.26	-	For 620N/mm² H.T. steel welding , excellent impact value at -30℃ . 620N/mm² 級高張力鋼等，低溫衝擊性能優。
SL-108M	AWS A5.5 E10018-M EN ISO 18275-A E 62 5 2NiMo B 3 2	638	725	22	60(-51℃)		0.060	1.12	0.25	1.98	-	0.35	-	For 690N/mm² H.T. steel welding , excellent impact value at -50℃ . 690N/mm² 級高張力鋼等，低溫衝擊性能優。
SL-118M	AWS A5.5 E11018-M EN ISO 18275-A E 69 5 Mn2NiCrMo B 3 2	695	785	23	58(-51℃)		0.070	1.42	0.23	1.92	-	0.43	-	For 780N/mm² H.T. steel welding , excellent impact value at -50℃ . 780N/mm² 級高張力鋼等，低溫衝擊性能優。
SL-110	AWS A5.5 E11016-G EN ISO 18275-A E 69 2 Mn2NiMo B 1 2	682	800	23	80(-20℃)		0.080	1.10	0.25	2.2	0.32	0.50	-	For 780N/mm² H.T. steel of welding. 780N/mm² 級高張力鋼等。
SL-120	AWS A5.5 E12016-G EN ISO 18275-A E 79 2 Mn2NiMo B 1 2	792	910	23	72(-20℃)		0.080	1.65	0.67	2.45	0.18	0.58	-	For 830N/mm² H.T. steel of welding. 830N/mm² 級高張力鋼等。
☐ For Heat Resistant Steel 低合金耐熱鋼被覆電銲條														
SC-70A1	AWS A5.5 E7010-A1 ISO 3580-A E Mo B 2 2	銲後熱處理 (PWHT)620℃ × 1hr			-		0.093	0.41	0.23	-	-	0.55	-	For high pressure pipeline, oil tanks and boilers. 高壓管路、油槽、鍋爐等場所。
		510	570	27										
SR-76A1	AWS A5.5 E7016-A1 ISO 3580-A E Mo B 1 2	銲後熱處理 (PWHT)620℃ × 1hr			-		0.068	0.55	0.57	-	-	0.54	-	For C-Mo steels welding. 鉬鋼用。
		505	582	32										
SR-78A1	AWS A5.5 E7018-A1 ISO 3580-A E Mo B 3 2	銲後熱處理 (PWHT)620℃ × 1hr			-		0.082	0.80	0.52	-	-	0.55	-	For C-Mo steels welding. 鉬鋼用。
		488	580	31										
SR-86B2	AWS A5.5 E8016-B2 ISO 3580-A E CrMo1 B 1 2	銲後熱處理 (PWHT)690℃ × 1hr			-		0.070	0.51	0.33	-	1.27	0.52	-	For 1.25%Cr-0.5%Mo low alloy steels welding. 500℃高溫下使用之 1.25Cr-0.5Mo 鋼。
		532	626	26										
SR-88B2	AWS A5.5 E8018-B2 ISO 3580-A E CrMo1 B 3 2	銲後熱處理 (PWHT)690℃ × 1hr			-		0.080	0.59	0.28	-	1.29	0.54	-	For 1.25%Cr-0.5%Mo low alloy steels welding. 500℃高溫下使用之 1.25Cr-0.5Mo 鋼。
		590	670	26										
SR-96B3	AWS A5.5 E9016-B3 ISO 3580-A E CrMo2 B 1 2	銲後熱處理 (PWHT)690℃ × 1hr			-		0.070	0.52	0.31	-	2.40	1.07	-	For 2.25%Cr-1%Mo low alloy steels welding. 2.25Cr-1Mo 鋼。
		605	722	25										
SR-98B3	AWS A5.5 E9018-B3 ISO 3580-A E CrMo2 B 3 2	銲後熱處理 (PWHT)690℃ × 1hr			-		0.070	0.49	0.26	-	2.40	1.06	-	For 2.25%Cr-1%Mo low alloy steels welding. 2.25Cr-1Mo 鋼。
		629	692	25										
SR-86B6	AWS A5.5 E8016-B6 ISO 3580-A E CrMo5 B 1 2	銲後熱處理 (PWHT)740℃ × 1hr			-		0.080	0.55	0.30	-	5.58	0.57	-	For 5%Cr-0.5%Mo low alloy steels welding. 5%Cr-0.5%Mo 鋼。
		540	630	22										
SR-86B8	AWS A5.5 E8016-B8 ISO 3580-A E CrMo9 B 1 2	銲後熱處理 (PWHT)740℃ × 1hr			-		0.080	0.53	0.29	-	9.88	1.05	-	For 9%Cr-1%Mo low alloy steels welding. 9%Cr-1%Mo 鋼。
		560	670	24										
SR-591	AWS A5.5 E9015-B91	銲後熱處理 (PWHT)760℃ × 2hr			-		0.092	0.70	0.24	0.48	9.00	1.05	V:0.22 Nb:0.04 N:0.03	for 9%Cr-1%Mo-V-Nb (T91/P91) steels welding. 9%Cr-1%Mo-V-Nb (T91/P91) 鋼銲接用。
		610	730	20										
SR-592	AWS A5.5 E9015-B92	銲後熱處理 (PWHT)760℃ × 2hr			-		0.099	0.60	0.20	0.50	9.28	0.49	W:1.77 V:0.21 Nb:0.05 N:0.04	for 9%Cr-W-V-Nb (T92/P92) steels welding. 9%Cr-W-V-Nb (T92/P92) 鋼銲接用。
		636	731	21										

Stick Electrode 被覆電銲條
SMAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm²)	T.S.(N/mm²)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ **For Low Temperature Service Steel** 低合金耐低溫鋼被覆電銲條														
SN-86C1	AWS A5.5 E8016-C1 EN ISO 2560-A E 46 6 2Ni B 1 2	銲後熱處理 (PWHT)610℃ × 1hr			64(-60℃)		0.070	0.79	0.43	2.56	-	-	-	For low temperature application i.e. welding 2.5%Ni steels & Al-killed steel. 低溫用鋁淨鋼及 2.5%Ni 鋼。
		484	576	32										
SN-88C1	AWS A5.5 E8018-C1 EN ISO 2560-A E 46 6 2Ni B 3 2	銲後熱處理 (PWHT)610℃ × 1hr			61(-60℃)		0.080	0.85	0.51	2.55	-	-	-	For low temperature application i.e. welding 2.5%Ni steels & Al-killed steel. 低溫用鋁淨鋼及 2.5%Ni 鋼。
		480	580	33										
SN-86C2	AWS A5.5 E8016-C2 EN ISO 2560-A E 46 6 3Ni B 1 2	銲後熱處理 (PWHT)610℃ × 1hr			86(-75℃)		0.080	0.94	0.51	3.22	-	-	-	For welding3.5%Ni steels of low temperature application & LPG storage tank. LPG 貯槽或低溫用 3.5%Ni 鋼的銲接。
		483	586	31										
SN-88C2	AWS A5.5 E8018-C2 EN ISO 2560-A E 46 6 3Ni B 3 2	銲後熱處理 (PWHT)610℃ × 1hr			81(-75℃)		0.070	0.90	0.56	3.54	-	-	-	For welding3.5%Ni steels of low temperature application & LPG storage tank. LPG 貯槽或低溫用 3.5%Ni 鋼的銲接。
		470	570	32										
SN-86C3	AWS A5.5 E8016-C3 EN ISO 2560-A E 46 4 1Ni B 1 2	514	598	28	95(-40℃)		0.060	0.94	0.28	0.96	0.09	0.01	-	For welding low hydrogen electrodes in low temperature applications for Al-killed steel at minus 40 centigrade. 低氫系銲條，在低溫 -40℃用鋁淨鋼。
SN-88C3	AWS A5.5 E8018-C3 EN ISO 2560-A E 46 4 1Ni B 3 2	480	560	29	106(-40℃)		0.070	0.91	0.30	1.02	0.11	0.01	-	For welding low hydrogen electrodes in low temperature applications for Al-killed steel at minus 40 centigrade. 低氫系銲條，在低溫 -40℃用鋁淨鋼。
SN-86G	AWS A5.5 E8016-G EN ISO 2560-A E 50 5 2Ni B 1 2	510	579	28	110(-50℃)		0.060	0.98	0.42	1.98	-	-	-	For LPG storage tank and Al-Killed steels for low temperature service. LPG 貯槽或低溫條件下使用的高強度鋼的銲接。
SN-88G	AWS A5.5 E8018-G EN ISO 2560-A E 50 5 2Ni B 3 2	536	596	28	125(-50℃)		0.060	1.02	0.45	2.00	-	-	-	For LPG storage tank and Al-Killed steels for low temperature service. LPG 貯槽或低溫條件下使用的高強度鋼的銲接。
SN-98G	AWS A5.5 E9018-G EN ISO 18275-A E 55 4 Mn1NiMo B 3 2	584	730	26	57(-40℃)		0.070	1.5	0.49	0.90	-	0.31	-	For LPG storage tank and Al-Killed steels for low temperature service. LPG 貯槽或低溫條件下使用的高強度鋼的銲接。
☐ **For Atmospheric Corrosion Resistant Steel** 低合金耐候鋼被覆電銲條														
SW-78W1	AWS A5.5 E7018-W1	517	582	30	150(-20℃)		0.060	0.62	0.45	0.33	0.19	-	Cu : 0.46	For 490N/mm² grade weathering steel welding. 用於 490N/mm² 耐候性鋼之銲接。
SW-88W2	AWS A5.5 E8018-W2	562	616	28	143(-20℃)		0.070	0.63	0.41	0.63	0.65	-	Cu : 0.55	For 590N/mm² grade weathering steel welding. 用於 590N/mm² 耐候性鋼之銲接。

Stick Electrode 被覆電銲條
SMAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
For Stainless Steel 不銹鋼被覆電銲條														
SS-307	AWS A5.4 E307-16 EN ISO 3581-A E 18 9 Mn Mo R 1 2	-	610	42	-		0.089	4.3	0.55	9.62	19.50	0.8	-	It suits for non-magnetic steel , high Mn steel and dissimilar steels welding. 無磁性鋼、高錳鋼等。
SS-307HM	-	-	615	42	-		0.098	5.5	0.45	8.80	19.70	-	-	It suits for non-magnetic steel , high Mn steel and dissimilar steels welding. 無磁性鋼、高錳鋼等。
SS-308	AWS A5.4 E308-16 EN ISO 3581-A E 19 9 R 1 2	-	591	40	-		0.058	1.28	0.62	9.43	19.50	-	-	For higher carbon 18%Cr-8%Ni stainless steel. 18Cr-8Ni 鋼。
SS-308H	AWS A5.4 E308H-16 EN ISO 3581-A E 19 9 R 1 2	-	594	39	-		0.060	1.12	0.55	9.38	19.70	-	-	For higher carbon 18%Cr-8%Ni stainless steel. 18Cr-8Ni 鋼。
SS-308L	AWS A5.4 E308L-16 EN ISO 3581-A E 19 9 L R 1 2	-	585	41	-		0.024	1.32	0.58	9.51	19.94	-	-	For low carbon 18%Cr-8%Ni stainless steel. 18Cr-8Ni 鋼。
SS-308LT	AWS A5.4 E308L-16 EN ISO 3581-A E 19 9 L R 1 2	-	575	41	33(-196℃)		0.024	1.32	0.45	10.89	19.45	-	-	For low carbon 18%Cr-8%Ni stainless steel with superior ductility at low temperature applications. 低碳 18Cr-8Ni 鋼，低溫韌性。
SS-309	AWS A5.4 E309-16	-	615	37	-		0.060	1.24	0.67	12.93	24.20	-	-	For 22%Cr-12%Ni stainless steel and dissimilar steels welding. 22Cr-12Ni 鋼，異材銲接。
SS-309L	AWS A5.4 E309L-16 EN ISO 3581-A E 23 12 L R 1 2	-	608	36	-		0.032	1.26	0.65	13.44	24.12	-	-	For low carbon 22%Cr-12%Ni stainless steel and dissimilar steels welding. 低碳 22Cr-12Ni 鋼，異材銲接。
SS-309MoL	AWS A5.4 E309LMo-16 EN ISO 3581-A E 23 12 2 L R 1 2	-	661	36	-		0.031	0.85	0.81	13.20	22.79	2.24	-	For dissimilar welding of carbon steels and stainless steels. 碳鋼與不銹鋼的異種金屬銲接。
SS-309Nb	AWS A5.4 E309Nb-16	-	638	34	-		0.045	1.16	0.74	13.45	23.22	-	Nb:0.87	For petrochemical, power plants on root pass of SUS 304, SUS347 steel. 適合於石化、電廠用，SUS 304 或 SUS 347 複合鋼板之覆層打底用。
SS-310	AWS A5.4 E310-16 EN ISO 3581-A E 25 20 R 1 2	-	594	36	-		0.110	1.62	0.28	21.23	26.75	-	-	For 25%Cr-20%Ni Stainless and dissimilar steels welding. 25Cr-20Ni 鋼，異材銲接。
SS-312	AWS A5.4 E312-16 EN ISO 3581-A E 29 9 R 1 2	-	813	28	-		0.110	1.03	0.82	10.13	28.87	-	-	For 29%Cr-9%Ni stainless steel and dissimilar steels welding. 29Cr-9Ni 鑄鋼，異材銲接。
SS-316	AWS A5.4 E316-16 EN ISO 3581-A E 19 12 2 R 1 2	-	558	38	-		0.051	1.26	0.81	11.46	19.12	2.23	-	For 18%Cr-12%Ni-2.5%Mo stainless steel welding. 18Cr-12Ni-2.5Mo 鋼。
SS-316L	AWS A5.4 E316L-16 EN ISO 3581-A E 19 12 2 R 1 2	-	551	39	-		0.027	1.2	0.63	12.10	18.92	2.29	-	For low carbon 18%Cr-12%Ni-2.5%Mo stainless steel welding. 低碳 18Cr-12Ni-2.5Mo 鋼。
SS-316LT	AWS A5.4 E316L-16 EN ISO 3581-A E 19 12 2 R 1 2	-	562	41	33(-196℃)		0.033	1.53	0.34	12.50	18.39	2.28	-	For low carbon 18%Cr-12%Ni-2.5%Mo stainless steel welding with superior ductility at low temperature applications. 18Cr-12Ni-2.5Mo 鋼，低溫韌性。
SS-317L	AWS A5.4 E317L-16	-	597	39	-		0.030	1.45	0.42	12.49	20.50	3.52	-	For welding AISI type 317 , 317L steel. AISI 317, 317L 鋼。
SS-318	AWS A5.4 E318-16 EN ISO 3581-A E 19 12 3 Nb R 1 2	-	589	39	-		0.030	0.87	0.75	12.00	19.10	2.53	Nb: 0.31	For welding 18%Cr-12%Ni-2%Mo-Ti (316Ti) steel. 18Cr-12Ni-2Mo-Ti(316Ti) 鋼。
SS-347	AWS A5.4 E347-16 EN ISO 3581-A E 19 9 Nb R 1 2	-	643	37	-		0.038	1.41	0.52	9.60	20.50	-	Nb:0.56	For welding 18%Cr-9%Ni-Ti(321) steel. 18Cr-9Ni-Ti(321) 鋼。

Stick Electrode 被覆電銲條
SMAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
For Stainless Steel 不銹鋼被覆電銲條														
SS-385	AWS A5.4 E385-16 EN ISO 3581-A E 20 25 5 Cu N L R 1 2	-	577	36	-		0.027	1.62	0.49	24.67	20.42	4.35	Cu:1.46	For welding 20Cr-25Ni-4.7Mo-1.5Cu steel 20%Cr-25%Ni-4.7%Mo-1.5%Cu。
SS-410	AWS A5.4 E410-16 EN ISO 3581-A E 13 R 1 2	銲後熱處理 (PWHT)730℃ × 1hr			-		0.030	0.41	0.53	0.15	12.38	-	-	For 13%Cr stainless steel welding. 13Cr 鋼。
		-	540	22										
SS-410NM	AWS A5.4 E410NiMo-16 EN ISO 3581-A E 13 4 R 1 2	銲後熱處理 (PWHT)620℃ × 1hr			-		0.030	0.25	0.32	4.58	11.46	0.53	-	For 13Cr-4Ni-Mo stainless steel welding. 13Cr-4Ni-Mo 鋼。
		860	988	19										
SS-430	AWS A5.4 E430-16 EN ISO 3581-A E 17 R 1 2	銲後熱處理 (PWHT)780℃ × 2hr			-		0.025	0.83	0.64	0.20	17.20	-	-	It is applicable on SUS430 & heavy oil burner and accessories. 適用 SUS430 及重油燃燒器零件等。
		-	510	28										
SS-2209	AWS A5.4 E2209-16 EN ISO 3581-A E 22 9 3 N L R 1 2	-	760	30	-		0.030	0.89	0.55	8.83	22.57	3.05	N:0.13	For welding alloy 2205 duplex stainless steel. 2205 覆面鋼。
SS-2594	AWS A5.4 E2594-16 EN ISO 3581-A E 25 9 4 N L R 1 2	-	939	26	-		0.023	0.71	0.83	9.00	24.87	3.85	N:0.26	For welding alloy UNS S32750(Alloy 2507)、UNS J93404、A890 GR. 5A. 適用於 UNS S32750(Alloy 2507)、UNS J93404、A890 GR. 5A。
SS-2595	AWS A5.4 E2595-16 EN ISO 3581-A E 25 9 4 W N L R 1 2	-	902	20	-		0.035	0.77	0.69	8.30	25.50	4.11	N:0.24 Cu:0.60 W:0.72	For welding alloy UNS S32750(Alloy 2507)、UNS J93404、A890 GR. 5A. 適用於 UNS S32750(Alloy 2507)、UNS J93404、A890 GR. 5A。
For Cast Steel 鑄鐵被覆電銲條														
SN-55	AWS A5.15 ENiFe-Cl	-	-	-	-		1.210	0.25	1.75	50.04	-	-	-	For welding various types of cast irons , cast irons to steel. 球狀石墨延性鑄鐵，一般生鐵補修，硬化堆銲。
SN-99	AWS A5.15 ENi-Cl	-	-	-	-		1.120	0.15	1.80	91.00	-	-	-	For welding cast iron to cast iron , dissimilar steels. 各種鑄件品之補修，合金鑄鐵，鋼與鑄鐵接合。
For Nickel Alloy Steel 鎳合金鋼被覆電銲條														
SNF-1	AWS A5.11 ENiCrFe-1 EN ISO 14172 E Ni 6062	-	622	41	86(-196℃)		0.060	2.93	0.28	72.34	15.20	-	Fe:9.82 Nb:2.13	For Inconel alloy and dissimilar metals welding. 適用於 Inconel 對接，或 Inconel 和低合金鋼、不銹鋼等異材銲接用。
SNF-2	AWS A5.11 ENiCrFe-2 EN ISO 14172 E Ni 6092	-	603	42	75(-196℃)		0.070	1.84	0.43	73.26	13.70	2.31	Fe:2.78 Nb:1.57	For LNG , liquidized nitrogen storage tank and 9%Ni steel. 適用於 LNG 貯藏槽、液化氮貯藏槽、及低溫用 9% 鎳鋼之銲接。
SNF-3	AWS A5.11 ENiCrFe-3 EN ISO 14172 E Ni 6182	-	635	40	92(-196℃)		0.038	7.32	0.27	70.14	14.80	-	Fe:3.61 Nb:1.43	For Inconel alloy and dissimilar metals welding. 適合壓力容器及化學槽銲接，Inconel 銲接、Inconel 和低合金鋼、不銹鋼等之異材銲接。
SNM-3	AWS A5.11 ENiCrMo-3 EN ISO 14172 E Ni 6625	-	783	39	65(-196℃)		0.038	0.36	0.26	61.24	21.70	9.38	Fe:2.51 Nb:3.38	For Inconel 625 and dissimilar metals welding. 適用於 Incon 625、高鎳合金材質及異種鋼材銲接，9%Ni 高強度鋼銲接及軟鋼覆面堆銲。
SNM-4	AWS A5.11 ENiCrMo-4 EN ISO 14172 E Ni 6276	-	726	38	-		0.018	0.67	0.13	56.94	15.83	15.76	Fe:6.28 W:3.77	For chemical process equipment, i. e. Hastelloy C-276, Ni-Alloy welding and carbon steel overlaying. 適用於化工製程設備，HASTELLOY C-276，鎳合金銲接及軟鋼覆面堆銲。
SNM-6	AWS A5.11 ENiCrMo-6 EN ISO 14172 E Ni 6620	-	710	39	73(-196℃)		0.033	2.47	0.42	71.46	12.79	5.46	Fe:4.41 W:1.53	For LNG, low temperature vessel and 5% Ni and 9% Ni steel. 適用於 LNG 儲罐，低溫儲槽及 5Ni 或 9Ni 鋼。

Stick Electrode 被覆電銲條
SMAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ **For Hardfacing Steel** 硬面鋼被覆電銲條														
SH-26R	-	熔金硬度值 (HRC)		22~26			0.210	0.48	0.53	-	1.42	-	-	For repair the worn part of crane wheel, bulldozer blade, crusher jaw, shovel tooth and dipper tip . 轉輪、鏈輪、軸心、齒輪、車輪。
SH-35R	-	熔金硬度值 (HRC)		30~36			0.270	1.25	0.32	-	1.90	-	-	For repair the gears, track and chain. 傳動齒輪、履帶、泥鏟、泥斗、鏈條、車軸等零件之銲補。
SH-45	-	熔金硬度值 (HRC)		41~46			0.160	1.91	0.38	-	2.16	-	-	For repair the gears, track and chain. 傳動齒輪、履帶、泥鏟、泥斗、鏈條、車軸等零件之銲補。
SH-45R	-	熔金硬度值 (HRC)		41~46			0.240	1.28	0.36	-	2.43	-	-	For repair the gears, track and chain. 傳動齒輪、履帶、泥鏟、泥斗、鏈條、車軸等零件之銲補。
SH-50	-	熔金硬度值 (HRC)		48-~52			0.210	0.24	0.48	0.18	11.36	-	-	For resistance to abrasion accompanied with impact at high temperature . Such as drive sprocket. 高溫時耐衝擊磨耗優異，適用於輸送機轉輪、傳動鋼輪、鋼釘等工件修補。
SH-50N4	-	熔金硬度值 (HRC)		46~49			0.140	0.24	0.58	3.71	11.58	0.69	-	It is suitable for dies ,turbine blades , and agitator propellers. 高溫時返復加熱對磨耗抵抗性優，如水車輪葉片，熱交換器翼等。
SH-58HC	-	熔金硬度值 (HRC)		57~60			4.010	1.35	0.69	-	34.77	-	-	Superior abrasion resistance at high temperature for hydropulpers, cutters, and screens. 高溫時耐磨耗優異，適用於攪拌葉片、切刀、篩器等工件修補。
SH-60	-	熔金硬度值 (HRC)		41~45			0.310	1.55	0.32	-	4.11	-	-	Good abrasion resistance accompanied with medium impact. It is suitable for crusher jaw ,pump impeller. 銲補開山機輪鏈，碎石機、連結環、鏟斗、碎石板、堆土板及、車導、鏟齒、履帶、泵筒、刀片等金屬接觸面間磨耗。
SH-80	-	熔金硬度值 (HRC)		56~60			0.590	1.12	0.61	-	7.07	0.54	-	Suitable for pump impeller , cutter blade and agitator propeller. 嚴厲磨耗如幫浦泵筒、切刀、泵筒輪葉、堆土板等。
SH-80R	-	熔金硬度值 (HRC)		53~57			0.370	0.48	0.52	-	5.41	-	-	Suitable for pump impeller , cutter blade and agitator propeller. 嚴厲磨耗如幫浦泵筒、切刀、泵筒輪葉、堆土板等。
SH-80W	-	熔金硬度值 (HRC)		56~60			0.670	1.18	1.26	-	7.10	1.42	W:2.04	For heavy abrasion . Suits for pump impeller , cutter blade and agitator propeller , sugar cane blade and hammer. 嚴厲磨耗之機械部份如幫浦泵筒、螺旋式輸送機、蔗刀、蔗鎚、堆土機零件等。
SH-80B	-	熔金硬度值 (HRC)		56~58			1.290	1.11	0.99	-	6.99	-	B:0.29	For heavy abrasion . Pump Impeller, Hydropulpers. 嚴厲磨耗之機械部份如泵筒輪葉、攪拌葉片。
SH-90	-	熔金硬度值 (HRC)		57~61			0.630	1.07	0.64	-	7.32	0.93	-	Good resistance to abrasion accompanied by light impact. It is suitable for earth moving machinery , sand pump , and buckets. 低衝擊，磨損激烈部份如土木建設機械，疏浚機械部份、鏟斗、吸砂泵等。
SH-95HS	-	熔金硬度值 (HRC)		60~64			0.930	0.33	0.45	-	3.85	5.23	V:1.83 W:6.12	Good resistance to metal-to-metal wear. It' s suitable for repair of lathe tools, dies and high speed steels. 切削工具、模具、高速鋼、熱沖模等銲補。
SH-95HC	-	熔金硬度值 (HRC)		56~61			5.130	3.61	0.32	-	30.42	-	-	Excellent resistance to abrasion with light impact . It' s suitable for repair of hydropulpers , cutters , and screens. 硬度大，耐腐蝕性能優異如攪拌葉片、切刀、篩器等。
SH-95HN	-	熔金硬度值 (HRC)		58~62			5.370	1.28	1.56	-	25.40	5.52	Nb:3.41 V:1.52 W:1.81	Excellent resistance to high temperature wear , severe abrasion with light impact . It' s suitable for repair of shot peening nozzles , screws ,chutes in sintering plant. 耐高溫磨耗特優如噴砂嘴、泵胴，泵浦輪葉、燃燒噴嘴等。
SH-W	-	熔金硬度值 (HRC)		58~62			3.140	2.12	0.38	-	-	-	W:41.58	Very excellent resistance to severe abrasion with light impact. It's suitable for repair of concrete cutters, pump impellers, cutter blades and shovel teeth. 耐高溫磨耗特優如噴砂嘴、泵筒、幫浦輪葉、燃燒噴嘴等。
SH-WM	-	熔金硬度值 (HRC)		58~62			3.530	1.30	0.47	-	-	6.65	W:34.2	Superior abrasion resistance at high temp. good for repair of concrete cutters, pump impellers, cutter blades and shovel teeth. 耐磨性最優，如刮刀、攪拌螺旋葉、切刀、鏟斗齒等。
SH-MN	AWS A5.13 EFeMn-A	熔金硬度值 (HRC)		加工硬化後 41~46			0.670	13.48	0.56	3.68	-	-	-	Excellent resistance to heavy impact .It' s suitable for repair of 13%Mn steels and crushing hammers. 重衝擊磨耗之場合，13Mn 鑄鋼品之補銲如粉碎機沖鎚。

Flux Cored Wire 包藥銲線
FCAW

Flux Cored Wire 包藥銲線
FCAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ For 490N/mm^2 High Tensile Steel 490N/mm^2 級高張力鋼包藥銲線														
SFC-71	AWS A5.20 E71T-1C/1M AWS A5.36 E71T1-C1A0-CS1 AWS A5.36 E71T1-M21A0-CS1 EN ISO 17632-A T42 2 P C1/M21 1 H5	474	573	28	92(-20℃)		0.051	1.36	0.48	-	-	-	-	For welding shipbuilding storage vessels , structural fabrication , machinery and piping etc. Titanium Dioxide flux cored wire with superior impact strength and good for all-positional welding. 氧化鈦系包藥銲線，全位置作業性良好，衝擊性能優。 適合應用於造船、儲槽、結構、機械與管路焊接。
SFC-70C	AWS A5.20 E70T-1C AWS A5.36 E70T1-C1A0-CS1 EN ISO 17632-A T42 2 P C1 3 H5	467	554	27	70(-20℃)		0.047	1.25	0.42	-	-	-	-	It's a metal cored flux cored wire to be used by CO2 gas shielding provides high efficency for flat and horizontal welding. 金屬系包藥銲線，保護氣體 CO2，平銲及高速水平角銲。
SFC-71Ni	AWS A5.20 E71T-1C/1M-J AWS A5.36 E71T1-C1A4-CS1 AWS A5.36 E71T1-M21A4-CS1 EN ISO 17632-A T42 4 P C1/M21 1 H5	492	550	28	74(-40℃)		0.048	1.35	0.46	0.37	-	-	-	Rutile-type FCW and excellent impact value at - 40℃ . 適用於船體、容器、管路之銲接，-40℃衝擊性能優。
SFC-71J	AWS A5.20 E71T-1C/1M-J AWS A5.36 E71T1-C1A4-CS1 AWS A5.36 E71T1-M21A4-CS1 ISO 17632-A T46 4 P C1/M21 1 H5	535	560	30	79(-40℃) 75(-50℃)		0.050	1.25	0.37	-	-	-	-	Rutile-type FCW and excellent impact value at low temperature. 適用於船體、容器、管路之銲接，低溫衝擊性能優。
SFC-71M	AWS A5.18 E70C-6C/6M AWS A5.36 E70T15-C1A4-CS1 AWS A5.36 E70T15-M21A4-CS1 EN ISO 17632-A T42 4 M C1/M21 3 H5	466	530	31	60(-40℃) 56(-50℃)		0.040	1.23	0.35	-	-	-	-	CO2 or mixed gas metal cored FCW . Good weldability and excellent impact value. 使用 CO2 或 Ar/CO2 混合氣為保護氣體，作業性良好，衝擊性能優。
SFC-75	AWS A5.20 E71T-5C/5M AWS A5.36 E71T5-C1A2-CS1 AWS A5.36 E71T5-M21A2-CS1 EN ISO 17632-A T42 3 B C1/M21 1 H5	495	570	28	93(-30℃)		0.045	1.3	0.45	-	-	-	-	Suits for mild steel and 490N/mm^2 H.T. steel , good impact value at -30℃ . 適用於船體、儲槽、容器、鋼結構之銲接，-30℃衝擊性能優。
SFC-04	AWS A5.20 E70T-4 AWS A5.36 E70T4-AZ-CS3 EN ISO 17632-A T42 Z W N 3	458	575	25	-		0.220	0.36	0.35	-	-	-	Al:1.23	Welding for civil construction , building and machinery . It also can be applied to build up for hardfacing. 適用於機械、建築結構之銲接及重型結構之修補，亦可做為硬面耐磨銲補之打底用材。
SFC-07	AWS A5.20 E70T-7 AWS A5.36 E70T7-AZ-CS3 EN ISO 17632-A T42 Z W N 3	486	582	23	-		0.230	0.38	0.20	-	-	-	Al:1.42	High deposition rate and deep penetration . Suits for mild steel and 490N/mm^2 H.T. steel. 490N/mm^2 級高張力鋼用，穿透深度佳，熔填速度快。
SFC-18	AWS A5.20 E71T-8 AWS A5.36 E71T8-A2-CS3 EN ISO 17632-A T42 3 Y N 1	442	553	24	47(-30℃)		0.150	0.72	0.13	-	-	-	Al:0.68	All position self-shield flux cored wire used for mild steel and 490N/mm^2 H.T. steel. 490N/mm^2 級高張力鋼用，全位置自遮護銲接。
SFC-71B	AWS A5.20 E71T-11 AWS A5.36 E71T11-AZ-G	420	530	26	-		0.010	0.70	0.40	-	-	-	Al:1.40	All position self-shield flux cored wire use for mild steel and 490 N/mm^2 H.T. Steel. 490 N/mm^2 級高張力鋼用，全位置自遮護銲接。
SFC-71G	AWS A5.20 E71T-GS AWS A5.36 E71TGS-AZ-G	-	576	-	-		0.240	1.23	0.18	-	-	-	Al:2.60	Single pass self-shield flux cored wire used for mild steel and 490N/mm^2 H.T. steel. 490N/mm^2 級高張力鋼用，單道銲接自遮護銲接。

Flux Cored Wire 包藥銲線
FCAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm²)	T.S.(N/mm²)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ For 490N/mm² High Tensile Steel 490N/mm² 級高張力鋼電氣銲 (EGW)														
SFC-721	AWS A5.26 EG72T-1	485	580	25	56(-20℃)		0.080	1.32	0.26	-	-	0.12	-	Self-shield flux cored wire used for one pass, vertical up welding of electro gas welding. 垂直立向單道自遮護自動銲接。
☐ For ≧ 550N/mm² High Tensile Steel ≧ 550N/mm² 級高張力鋼包藥銲線														
SFC-81M	AWS A5.28 E80C-G AWS A5.36 E80T15-C1A8-G AWS A5.36 E80T15-M21A8-G EN ISO 17632-A - T46 6 Z M C1/M21 3 H5	520	582	30	57(-60℃)		0.036	1.21	0.36	1.32	-	-	-	CO2 or mixed gas metal cored FCW . Good weldability and excellent impact value. 使用 CO2 或 Ar/CO2 混合氣為保護氣體，作業性良好，衝擊性能優。
SFC-91M	AWS A5.28 E90C-G AWS A5.36 E90T15-M21A6-G EN ISO 17632-A - T50 5 Z M M21 3 H5	652	713	22	55(-50℃)		0.035	1.10	0.29	2.61	-	0.41	-	Mixed gas metal cored FCAW . Good weldability and excellent impact value. 使用 Ar/CO2 混合氣為保護氣體，作業性良好，衝擊性能優。
SFC-101	AWS A5.29 E101T1-GC/GM AWS A5.36 E101T1-C1AZ-G AWS A5.36 E101T1-M21AZ-G	660	721	22	-		0.060	1.21	0.45	0.63	0.35	0.41	-	For 690N/mm² H.T. steel welding. 690N/mm² 級高張力鋼等。
SFC-110	AWS A5.29 E111T1-GC/GM AWS A5.29 E111T1-K3C/K3M-J AWS A5.36 E111T1-C1AZ-G AWS A5.36 E111T1-M21AZ-G AWS A5.36 E111T1-C1A4-K3 AWS A5.36 E111T1-M21A4-K3	730	801	21	42(-40℃)		0.047	1.42	0.32	2.46	-	0.47	-	For 760N/mm² H.T. steel welding. 760N/mm² 級高張力鋼等。
SFC-120	AWS A5.29 E121T1-GC/GM AWS A5.36 E121T1-C1AZ-G AWS A5.36 E121T1-M21AZ-G	805	856	21	50(-30℃)		0.045	1.77	0.26	2.41	-	0.55	-	For 830N/mm² H.T. steel welding. 830N/mm² 級高張力鋼等。
☐ For Heat Resistant Steel 低合金耐熱鋼包藥銲線														
SFC-81A1	AWS A5.29 E81T1-A1C/A1M AWS A5.36 E81T1-C1PZ-A1 AWS A5.36 E81T1-M21PZ-A1 EN ISO 17634-A T Mo P C1/M21 1 H5	銲後熱處理 (PWHT)620℃ × 1hr 596	643	24	-		0.051	1.05	0.46	-	-	0.55	-	For welding 0.5%Mo low alloy steels. 0.5Mo 鋼用 CO2 遮護全位置銲接。
SFC-81B2	AWS A5.29 E81T1-B2C/B2M AWS A5.36 E81T1-C1PZ-B2 AWS A5.36 E81T1-M21PZ-B2 EN ISO 17634-A T CrMo1 P C1/M21 1 H5	銲後熱處理 (PWHT)690℃ × 1hr 552	628	21	-		0.055	0.92	0.42	-	1.12	0.61	-	For welding 1.25Cr-0.5%Mo low alloy steels in thermoelectric power plant and oil refiner. 1~1.25Cr-0.5Mo 鋼用 CO2 遮護全位置銲接。適合火力電廠與石油精煉。
SFC-91B3	AWS A5.29 E91T1-B3C/B3M AWS A5.36 E91T1-C1PZ-B3 AWS A5.36 E91T1-M21PZ-B3 EN ISO 17634-A T CrMo2 P C1/M21 1 H5	銲後熱處理 (PWHT)690℃ × 1hr 635	699	20	-		0.060	0.95	0.31	-	2.36	1.11	-	For welding 2.25Cr-1%Mo low alloy steels in thermoelectric power plant and oil refiner. 2.25Cr-1.0Mo 鋼用 CO2 遮護全位置銲接。適合火力發電與石油精煉。

Flux Cored Wire 包藥銲線
FCAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm²)	T.S.(N/mm²)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ **For Low Temperature Service Steel** 低合金耐低溫鋼包藥銲線														
SFC-81Ni1	AWS A5.29 E81T1-Ni1C/Ni1M AWS A5.36 E81T1-C1A2-Ni1 AWS A5.36 E81T1-M21A2-Ni1 EN ISO 17632-A T46 3 1Ni P C1/M21 1 H5	534	618	25	85(-30℃)		0.053	1.26	0.45	0.93	-	-	-	For 550N/mm² H.T. steel welding. 550N/mm² 級高張力鋼用。
SFC-81Ni2	AWS A5.29 E81T1-Ni2C/Ni2M AWS A5.36 E81T1-C1A4-Ni2 AWS A5.36 E81T1-M21A4-Ni2 EN ISO 17632-A T46 4 2Ni P C1/M21 1 H5	523	631	25	46(-40℃)		0.052	1.15	0.35	2.34	-	-	-	Good weldability on all-position and can be used to weld 2~3%Ni meet -40 C 590N/mm² low temperature service steel. -40℃ 590N/mm² 級低溫鋼用。適合全位置銲接與含 2~3%Ni 鋼。
SFC-91Ni2	AWS A5.29 E91T1-Ni2C/Ni2M AWS A5.36 E91T1-C1A4-Ni2 AWS A5.36 E91T1-M21A4-Ni2 EN ISO 17632-A T50 4 2Ni P C1/M21 1 H5	588	692	21	43(-40℃)		0.054	1.21	0.52	2.39	-	-	-	Good weldability on all-position and can be used to weld 2~3%Ni meet -40 C 620N/mm² low temperature service steel. -40℃ 620N/mm² 級低溫鋼用。適合全位置銲接與含 2~3%Ni 鋼。
SFC-81K2	AWS A5.29 E81T1-K2C/K2M AWS A5.36 E81T1-C1A8-K2 AWS A5.36 E81T1-M21A8-K2 EN ISO 17632-A T46 6 1.5Ni P C1/M21 1 H5	520	604	27	97(-60℃)		0.040	1.26	0.38	1.46	-	-	-	Good notch toughness can be obtained at -60℃ . -60℃低溫鋼用。
AFL-X70-O	AWS A5.29 E71T8-Ni1J AWS A5.36 E71T8-A4-Ni1 EN ISO 17632-A T42 4 1Ni Y N 1	424	523	28	120(-40℃)		0.060	1.13	0.12	0.82	-	-	Al:1.14	For welding X70 pipe steel. 適用於低溫衝擊韌性要求高的 X70 管線鋼銲接。
AFR-X80-O	AWS A5.29 E81T8-Ni2J H8 AWS A5.36 E81T8-A4-Ni2-H8 EN ISO 17632-A T46 4 2Ni Y N 1	485	578	24	110(-40℃)		0.050	1.10	0.07	1.83	-	-	Al:1.01	For welding X80 pipe steel. 適用於低溫衝擊韌性要求高的 X80 管線鋼銲接。
☐ **For Atmospheric Corrosion Resistant Steel** 低合金耐候鋼包藥銲線														
SFC-81W2	AWS A5.29 E81T1-W2C/-W2M AWS A5.36 E81T1-C1A2-W2 AWS A5.36 E81T1-M21A2-W2	594	658	25	53(-30℃)		0.040	1.18	0.55	0.48	0.55	-	Cu:0.41	For butt or fillet MAG welding of 590N/mm² weathering steel and A588, A242 steel. ASTM A588、A242 鋼材及 590N/mm² 級耐候性鋼之鋼結構、橋樑、儲槽等。
☐ **For Stainless Steel** 不銹鋼包藥銲線														
SFC-307	AWS A5.22 E307T1-1/-4 EN ISO 17633-A T 18 9 Mn Mo P C1/M21 2	-	589	40	-		0.053	3.62	0.68	9.52	19.50	0.8		For welding higher carbon 19%Cr-9%Ni-4%Mn steels. 高 C-19Cr-9Ni-4Mn 鋼用。
SFC-308H	AWS A5.22 E308HT-1/-4 EN ISO 17633-A T 19 9 P C1/M21 2	-	573	40	-		0.049	1.55	0.50	9.62	20.10	-	-	For welding higher carbon 18%Cr-8%Ni steels such as AISI 304, 308. 高 C-18Cr-8Ni 鋼用。如 AISI304, 308。

Flux Cored Wire 包藥銲線
FCAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例				Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)	C	Mn	Si	Ni	Cr	Mo	Others	
For Stainless Steel 不銹鋼包藥銲線													
SFC-308L	AWS A5.22 E308LT1-1/-4 EN ISO 17633-A T 19 9 L P C1/M21 2	-	562	42	38(-196℃)	0.031	1.55	0.52	9.83	19.72	-	-	For welding low carbon 18%Cr-8%Ni steels such as AISI 304, 308. 低碳 -18Cr-8Ni 鋼用。如 AISI 304, 308
SFC-309L	AWS A5.22 E309LT1-1/-4 EN ISO 17633-A T 23 12 L P C1/M21 2	-	572	40	35(-60℃)	0.031	1.56	0.51	12.62	23.62	-	-	For low carbon of 22%Cr-12%Ni stainless steel and welding for dissimilar steels. 低碳 -22Cr-12Ni 鋼用，異材銲接用。
SFC-309MoL	AWS A5.22 E309LMoT1-1/-4 EN ISO 17633-A T 23 12 2 L P C1/M21 2	-	585	37	-	0.030	0.89	0.71	13.60	23.40	2.43	-	It suits for welding of 22%Cr- 12% Ni- 2.5%Mo steel and dissimilar steel. 低碳 -22Cr-12Ni-2.5Mo 鋼用，異材銲接用。
SFC-312	AWS A5.22 E312T1-1/-4 EN ISO 17633-A T 29 9 P C1/M21 2	-	745	24	-	0.058	0.88	0.52	9.25	30.40	-	-	For welding of higher carbon steel and low-alloyed steel. 適用於含碳量稍高的碳鋼和低合金鋼異材銲接。
SFC-312M	-	-	730	23	-	0.024	0.81	0.55	8.30	26.40	-	other:1.6	It is suitable for welding dissimilar metals such as stainless steels and low-alloy steels, as well as for joining those steels which are hard to weld or possible to cause porosity during welding. 適用不銹鋼與碳鋼或低合金鋼的異材銲接、銲接困難或易發生氣孔。
SFC-316L	AWS A5.22 E316LT1-1/-4 EN ISO 17633-A T 19 12 3 L P C1/M21 2	-	572	40	37(-196℃)	0.028	1.56	0.43	12.03	17.83	2.59	-	For welding low carbon 18%Cr-12%Ni-2.5%Mo steels with better corrosion resistance. 低碳 -18Cr-12Ni-2.5Mo 鋼用。提升耐氣孔性。
SFC-316H	AWS A5.22 E316HT1-1/-4	-	581	38	-	0.053	1.42	0.51	11.71	18.23	2.53	-	For welding higher carbon 18%Cr-12%Ni-2.5%Mo steels with better corrosion resistance. 高碳 -18Cr-12Ni-2.5Mo 鋼用。提升耐氣孔性。
SFC-317L	AWS A5.22 E317LT1-1/-4 EN ISO 17633-A T 19 13 4 L P C1/M21 2	-	580	35	58(0℃)	0.030	0.85	0.58	13.11	18.94	3.61	-	For welding low carbon 18%Cr-12%Ni-3.5%Mo steels with better corrosion resistance. 低碳 -18Cr-12Ni-3.5Mo 鋼用。提耐氣孔性。
SFC-318	AWS A5.22 EGT1-1/-4 ISO 17633-A T 19 12 3 Nb P C1/M21 2	-	570	38	55(-60℃)	0.030	1.14	0.60	12.12	18.53	2.58	Nb:0.49	For welding chemical containers, i.e. AISI 316Ti, SUS 316Ti. 適用於化學容器之銲接，如 AISI 316Ti、SUS 316Ti 等。
SFC-347L	AWS A5.22 E347T1-1/-4 EN ISO 17633-A T 19 9 Nb P C1/M21 2	-	572	41	48(0℃)	0.031	0.93	0.54	10.28	19.28	-	Nb:0.48	For welding 18%Cr-9%Ni-Nb steels or 18%Cr-9%Ni-Ti steels. 低碳 18Cr-9Ni-Ti(321) 鋼用。
SFC-347H	AWS A5.22 E347HT1-1/-4 EN ISO 17633-A T 19 9 Nb P C1/M21 2	-	593	42	47(0℃)	0.053	1.21	0.42	10.32	19.78	-	Nb:0.44	For welding 18%Cr-9%Ni-Nb steels or 18%Cr-9%Ni-Ti steels. 低碳 -18Cr-9Ni-Ti(321) 鋼用。
SFC-410	AWS A5.22 E410T1-1/-4 EN ISO 17633-A T 13 P C1/M21 2	銲後熱處理 (PWHT)750℃ × 1hr -	564	26	-	0.061	0.41	0.45	0.21	11.43	-	-	For 13%Cr stainless steel welding. 13Cr 鋼。
SFC-410NM	AWS A5.22 EGT1-1/-4	熔金硬度值 (HRC)		39~43		0.038	0.42	0.38	3.81	11.85	0.82	-	It suits for metal to metal abrasion and/or within corrosion environment. 適用於金屬與金屬間磨耗及腐蝕的各種應用場合。
SFC-410NiMo	AWS A5.22 E410NiMoT1-1/-4 EN ISO 17633-A T 13 4 P C1/M21 2	銲後熱處理 (PWHT)620℃ × 1hr -	780	20	58(0℃)	0.040	0.31	0.43	4.39	11.31	0.49	-	For welding of ASTM CA6NM or steels with similar chemical composition. 用於銲接 ASTM CA6NM 鑄鋼或相似化學成分產品。
SFC-2209	AWS A5.22 E2209T1-1/-4 EN ISO 17633-A T 22 9 3 N L P C1/M21 2	-	786	27	-	0.031	0.85	0.53	8.75	22.25	3.25	N:0.11	For welding alloy 2205 duplex stainless steel with resistance to pitting corrosion and crack. 22Cr 雙相不銹鋼，如 Alloy2205。
SFC-2594	AWS A5.22 E2594T1-1/-4 EN ISO 17633-A T 25 9 4 N L P C1/M21 2	-	850	25	-	0.030	0.74	0.66	10.14	26.18	3.48	N:0.22	For welding alloy 2507 duplex stainless steel with resistance to pitting corrosion and crack. 25Cr 雙相不銹鋼，如 Alloy2507。

Flux Cored Wire 包藥銲線
FCAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
For Stainless Steel 不銹鋼包藥銲線														
SFC-2509	-	-	795	28	-		0.033	0.87	0.45	8.51	23.91	4.11	N:0.15	For welding alloy 2505 duplex stainless steel with resistance to pitting corrosion and crack. 25Cr 雙相不銹鋼，如 Alloy2505。
SFC-409Ti	AWS A5.22 EC409 EN ISO 17633-A T 13 Ti M M21 2	-	475	24			0.045	0.566	0.72	-	11.50	-	Ti:0.82	For welding AISI409 stainless steel and similar alloy steel, especially good at exhaust pipe system welding. AISI409 不銹鋼及相似成份的合金鋼，用於汽車排汽系統和汽車消音器銲接。
SFC-409Cb	AWS A5.22 EC409Nb	-	480	23			0.038	0.45	0.40	-	11.20	-	Nb:0.52	For welding AISI409 stainless steel and similar alloy steel, especially good at exhaust pipe system welding. AISI409 不銹鋼及相似成份的合金鋼，用於汽車排汽系統和汽車消音器銲接。
SFC-439Ti	AWS A5.22 EC439	-	508	37			0.033	0.42	0.50	0.15	18.20	-	Ti:0.65	For welding AISI439 stainless steel and similar alloy steel, especially good at exhaust pipe system welding. AISI439 不銹鋼及相似成份的合金鋼，用於汽車排汽系統和汽車消音器銲接。
For Nickel Alloy Steel 鎳合金鋼包藥銲線														
SFC-625	AWS A5.34 ENiCrMo3T1-4	-	750	32	80(-196℃)		0.015	0.10	0.30	65.10	21.00	9.30	Fe:0.3 Nb+Ta:3.3	For Inconel 625 and dissimilar metals welding, suitable for 9% Ni high tensile steel weling. 適用於 Incon 625、高鎳合金材質及異種鋼材銲接，9%Ni 高強度鋼銲接。
For Hardfacing Steel 硬面鋼包藥銲線														
SFH-12S	-	熔金硬度值 (HRC)		48~52			0.230	1.94	0.56	-	5.85	1.1	V:0.23 W:1.1	Excellent abrasion resistance . Flux combination SF-80. 抗黏著磨耗特性，搭配銲藥 SF-80。
SFH-17S	-	熔金硬度值 (HRC)		34~39			0.090	2.55	0.57	-	2.45	0.56	-	Used for metal to metal abrasion , excellent impact resistance . Flux combination SF-80. 抵抗金屬與金屬間磨耗，具有極佳的耐衝擊性，搭配銲藥 SF-80。
SFH-22S	-	熔金硬度值 (HRC)		28~34			0.090	1.99	0.49	-	0.52	2.38	-	For build-up and/or buttering on high carbon steel with excellent resistance to crack. Flux combination SF-82. 適用於高碳母材的打底堆銲及緩衝層，具有極佳的耐裂性，搭配銲藥 SF-82。
SFH-31S	-	熔金硬度值 (HRC)		30~33			0.170	2.63	0.62	-	-	0.68	-	It suits for build-up of continuous casting rolls, steel mill rolls, shafts, idlers, joumals or work pieces that machinability is required. Flux combination SF-80. 用於軋滾輪、惰輪、平軸硬面修補打底等覆面銲補，搭配銲藥 SF-80。
SFH-42S	-	熔金硬度值 (HRC)		46~51			0.220	1.42	0.53	-	12.70	-	-	Used for rebuilding continuous casting rolls under high temperature service in steel mill. Flux combination SF-80. 適合鋼廠連鑄滾輪修補，搭配銲藥 SF-80。
SFH-53S	-	熔金硬度值 (HRC)		46~52			0.230	2.07	0.45	3.2	6.60	1.84	V:0.45	Good heat adhesion resistance and bead marks resistance. 具有抗黏著磨耗及抗銲痕特性，搭配銲藥 SF-80。
SFH-55S	-	熔金硬度值 (HRC)		46~52			0.190	1.97	0.54	3.1	3.85	1.25	V:0.35	Good heat adhesion resistance and bead marks resistance. 具有抗黏著磨耗及抗銲痕特性，搭配銲藥 SF-80。
SFH-MNG	-	熔金硬度值 (HRC)		加工硬化後 44~48			0.710	12.75	0.45	0.21	-	-	-	Excellent resistance to heavy impact .It's suitable for repair of 13%Mn steels and crushing hammers. 重衝擊磨耗之場合，13Mn 鑄鋼品之補銲如粉碎機沖鎚。
SFH-25G	-	熔金硬度值 (HRC)		21~26			0.121	1.73	0.68	-	1.18	0.45	-	Used for rebuild the worn part of crane wheel ,bulldozer blade, crusher jaw, shovel tooth and dipper tip. 轉輪、鏈輪、軸心、齒輪、車輪等修補。
SFH-35G	-	熔金硬度值 (HRC)		33~37			0.186	1.9	0.72	-	1.56	0.53	-	Used for rebuild the gears, track and chain. 適用於傳動齒輪、惰輪、滑輪、履帶、碎石滾輪、泥鏟、泥斗、鏈條、車軸等零件。
SFH-42MG	-	熔金硬度值 (HRC)		48~52			0.220	0.42	0.43	-	12.61	0.91	-	It suits for the parts subjected to intense soil abrasion and corrosive wear. 適用於耐腐蝕磨耗、土壤磨擦之應用。
SFH-45G	-	熔金硬度值 (HRC)		42~47			0.240	1.44	0.13	-	3.78	-	-	Used for rebuilding the gears, track and chain. 傳動齒輪、履帶、泥鏟、泥斗、鏈條、車軸等零件之銲補。
SFH-50G	-	熔金硬度值 (HRC)		46~52			0.260	1.83	0.52	-	6.21	0.52	Ti:0.14	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。

Flux Cored Wire 包藥銲線
FCAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ **For Hardfacing Steel** 硬面鋼包藥銲線														
SFH-55G	-	熔金硬度值 (HRC)		53~57			0.320	2.28	0.71	-	7.59	0.62	Ti:0.14	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-58G	-	熔金硬度值 (HRC)		54~59			0.390	0.58	2.35	-	6.05	0.69	W:5.57	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-58GM	-	熔金硬度值 (HRC)		55~59			0.510	1.18	1.12	-	7.86	0.69	-	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-59G	-	熔金硬度值 (HRC)		55~59			0.650	0.98	0.68	-	8.21	-	Ti:0.22 B:0.29	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-61GM	-	熔金硬度值 (HRC)		58~62			2.930	0.72	1.12	-	25.13	-	W:0.29 Nb:0.19 B:0.15	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-61NbGM	-	熔金硬度值 (HRC)		58~64			5.340	0.59	1.56	-	21.24	-	Nb:2.49	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-62GM	-	熔金硬度值 (HRC)		57~63			2.320	0.66	0.71	0.17	23.98	-	V:0.11 B:0.41	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-63G	-	熔金硬度值 (HRC)		58~64			0.710	0.95	0.59	-	7.81	-	B:0.38	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-66WG	-	熔金硬度值 (HRC)		59~64			4.910	0.41	1.78	0.11	21.44	0.38	W:2.45 Nb:2.61 B:0.34	It is suitable for hardfacing of bulldozer blade, bucket lip, tipper teeth, the parts of impeller subjected to severe soil abrasion. 推土機鏟刀、吊桶唇、傾倒車牙、承受嚴重土壤磨擦之推進器部件之硬面銲接。
SFH-67NMG	-	熔金硬度值 (HRC)		65~68			6.020	0.39	2.05	-	22.68	1.75	Nb:2.74	It is suitable for hardfacing of wearing liner plate, agitator propeller, and crusher parts. 適用於襯板、螺旋葉輪、破碎機零件等硬面修補。
SFH-MN-O	-	熔金硬度值 (HRC)		加工硬化後 44~48			0.350	17.05	0.35	0.94	18.40	-	-	For hardfacing of crusher cone and hammer or for buttering. 適用於粉碎機錐形體，粉碎機沖鎚等之堆銲，或過度層之用途。
SFH-35-O	-	熔金硬度值 (HRC)		31~36			0.180	2.52	0.55	-	1.25	-	Al:1.7	It suits for metal to metal abrasion, i.e. track, guide wheel, sprocket, idler wheel and coveyor wheel shaft. 履帶、導輪、鍊輪、惰輪或鋼廠輸送滾輪軸心等金屬工件的磨損之硬面銲補。
SFH-41-O	-	熔金硬度值 (HRC)		38~42			0.280	2.12	0.58	-	1.25	0.51	-	It suits for metal to metal abrasion. 履帶、導輪、疏浚機零件、齒輪等工件之硬面或打底修補使用。
SFH-51-O	-	熔金硬度值 (HRC)		49~53			3.230	1.26	1.57	-	13.18	-	-	It provides excellent abrasion resistance and impact resistance. 磨煤輪、挖煤鏟，疏浚機切刀、輾煤齒等諸多硬面銲補工件。
SFH-56-O	-	熔金硬度值 (HRC)		52~60			0.480	1.25	0.68	-	6.23	0.85	-	Excellent abrasion resistance and moderate impact resistance. 適用於水泥攪拌器、挖刀頂緣、推土機堆剷等工作。
SFH-61-O	-	熔金硬度值 (HRC)		57~62			4.570	1.41	0.83	-	25.01	-	-	High hardness and excellent abrasion resistance, good for wear plate, coal grinding wheel & plate. 具有高硬度與優秀的耐磨料磨耗特性，如耐磨板、磨煤輪等。
SFH-65-O	-	熔金硬度值 (HRC)		62~65			4.860	0.57	0.84	-	23.30	5.32	W:1.1 Nb:5.23 V:1.12	Excellent abrasion resistance at high temperature. 適用於煤滾輪、鬼齒、研碎機零件等修補。
SFH-67-O	-	熔金硬度值 (HRC)		63~66			5.240	0.46	0.67	-	36.74		B:1.62	The deposit shows very high hardness and excellent abrasion resistance. 適用於煤滾輪、鬼齒、研碎機零件等修補。
SFH-70-O	-	熔金硬度值 (HRC)		64~68			5.430	0.52	0.75	-	38.35	-	B:1.83	The deposit shows very high hardness and excellent abrasion resistance. 適用於煤滾輪、鬼齒、研碎機零件等修補。

Solid Wire 實心銲線

MAG,MIG,TIG

Solid Wire 實心銲線

MAG,MIG,TIG

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm²)	T.S.(N/mm²)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ For 490N/mm² High Tensile Steel 490N/mm² 級高張力鋼實心銲線														
SMG-4	AWS A5.18 ER70S-4 EN ISO 14341-A-G 42 3 C1/M21 3Si1	470	540	28	62(-30℃)		0.100	1.36	0.75	-	-	-	-	Low welding current . It suits for mild steel and 490N/mm² H.T. steel. 490N/mm² 級高張力鋼，適較低的電流範圍。
SMG-6	AWS A5.18 ER70S-6 EN ISO 14341-A-G 42 3 C1/M21 3Si1	450	550	30	52(-30℃		0.080	1.53	0.88	-	-	-	-	Wide current range and all position welding for general structure of mild steel and 490N/mm² H.T. steel. 490N/mm² 級高張力鋼，適較大的電流範圍。
SMG-8	AWS A5.18 ER70S-G EN ISO 14341-A-G 42 3 C1/M21 Z	465	570	31	55(-30℃)		0.070	1.67	0.57	-	-	-	-	For thick plate and high welding current . It suits for mild steel and 490N/mm² H.T. steel. 490N/mm² 級高張力鋼，適厚板及較大的電流範圍。
SMG-52	AWS A5.18 ER70S-2 EN ISO 14341-A-G 42 3 C1/M21 2Ti	474	545	29	90(-30℃)		0.042	1.21	0.51	-	-	-	Al:0.06 Ti:0.08 Zr:0.04	It suits for 490N/mm² H.T. steel. 490N/mm² 級高張力鋼。
STG-50	AWS A5.18 ER70S-G EN ISO 636-A W 42 3 Z	470	550	30	155(-30℃)		0.070	1.51	0.78	-	-	-	-	Root welding for all position of mild steel and 490N/mm² H.T. steel. 490N/mm² 級高張力鋼 TIG 銲接。
STG-52	AWS A5.18 ER70S-2 EN ISO 636-A W 42 3 2Ti	480	561	29	120(-30℃)		0.042	1.18	0.49	-	-	-	Al:0.07 Ti:0.09 Zr:0.05	It suits for 490N/mm² H.T. steel. 490N/mm² 級高張力鋼。
STG-56	AWS A5.18 ER70S-6 EN ISO 636-A W 42 3 3Si1	461	570	28	105(-30℃)		0.090	1.44	0.88	-	-	-	-	Wide current range and all position welding for general structure of mild steel and 490N/mm² H.T. steel. 490N/mm² 級高張力鋼，適較大的電流範圍。
☐ For ≧ 550N/mm² High Tensile Steel ≧ 550N/mm² 級高張力鋼實心銲線														
SMG-60	AWS A5.28 ER80S-G EN ISO 14341-A-G 46 4 C1/M21 Z H5	515	585	29	58(-50℃)		0.080	1.52	0.62	-	-	0.32	-	High welding current . It suits for 590N/mm² H.T. steel. 590N/mm² 級高張力鋼，適較大的電流範圍。
SMG-60N	AWS A5.28 ER80S-G EN ISO 14341-A-G 46 6 C1/M21 Z H5	510	585	29	68(-60℃)		0.080	1.15	0.71	1.03	-	-	-	High welding current . It suits for 590N/mm² H.T. steel. 590N/mm² 級高張力鋼，適較大的電流範圍。
STG-60	AWS A5.28 ER80S-G EN ISO 16834-A W 55 3 I1 Z	585	675	29	103(-30℃)		0.060	1.72	0.57	-	-	0.41	-	It suits for 590N/mm² H.T. steel. 590N/mm² 級高張力鋼 TIG 銲接。
☐ For Heat Resistant Steel 低合金耐熱鋼實心銲線														
STG-80B2	AWS A5.28 ER80S-B2	銲後熱處理 (PWHT)690 ℃ ×1hr			-		0.080	0.59	0.53	-	1.29	0.53	-	For welding of 1.25%Cr-0.5%Mo steel. 1.25%Cr-0.5%Mo 鋼。
		490	580	26										
STG-80B6	AWS A5.28 ER80S-B6	銲後熱處理 (PWHT)740 ℃ ×1hr			-		0.080	0.46	0.42	0.40	5.53	0.56	-	For welding of 5%Cr-0.5%Mo steel. 5%Cr-0.5%Mo 鋼。
		495	614	25										
STG-90B3	AWS A5.28 ER90S-B3	銲後熱處理 (PWHT)690 ℃ ×1hr			-		0.080	0.58	0.48	-	2.37	1.02	-	For welding of 2.25%Cr-1%Mo steel. 2.25%Cr-1%Mo 鋼。
		590	660	22										
STG-90B9	AWS A5.28 ER90S-B9	銲後熱處理 (PWHT)750 ℃ ×1hr			-		0.090	0.56	0.24	0.66	8.74	0.92	Nb:0.05 V:0.2	For welding of 9%Cr-1%Mo-V steel. 9%Cr-1%Mo-V 鋼。
		610	730	20										

Solid Wire 實心銲線

MAG,MIG,TIG

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
For Stainless Steel 不銹鋼實心銲線														
SMG-307Si STG-307Si	-	-	600	40	-		0.070	6.74	0.7	8.92	19.51	0.12	-	For 18%Cr-8%Ni-4Mn stainless steel welding. 18%Cr-8%Ni-4Mn 鋼。
SMG-308L STG-308L	AWS A5.9 ER308L EN ISO 14343-A G/W 19 9 L	-	580	42	-		0.018	1.65	0.42	10.30	20.20	-	-	For low carbon 18%Cr-8%Ni stainless steel welding. 低碳 18%Cr-8%Ni 鋼。
SMG-308LSi STG-308LSi	AWS A5.9 ER308LSi EN ISO 14343-A G/W 19 9 L Si	-	590	42	-		0.021	1.88	0.78	10.40	19.90	-	-	For low carbon 18%Cr-8%Ni stainless steel welding. 低碳 18%Cr-8%Ni 鋼。
SMG-308H STG-308H	AWS A5.9 ER308H EN ISO 14343-A G/W 19 9 H	-	595	41	-		0.059	1.55	0.54	9.27	19.60	-	-	For 18%Cr-8%Ni stainless steel welding. 18%Cr-8%Ni 鋼。
SMG-309L STG-309L	AWS A5.9 ER309L EN ISO 14343-A G/W 23 12 L	-	590	40	-		0.015	1.51	0.45	12.80	23.20	-	-	For low carbon 22%Cr-12%Ni stainless steel and dissimilar welding. 低碳 22%Cr-12%Ni 鋼，異材銲接。
SMG-309MoL STG-309MoL	AWS A5.9 ER309LMo EN ISO 14343-A G/W 23 12 2 L	-	615	41	-		0.026	1.78	0.50	13.19	23.72	2.51	-	For low carbon 22%Cr-12%Ni-2%Mo stainless steel and dissimilar welding. 低碳 22%Cr-12%Ni-2%Mo 鋼，異材銲接。
SMG-309LSi STG-309LSi	AWS A5.9 ER309LSi EN ISO 14343-A G/W 23 12 L Si	-	587	39	-		0.017	1.81	0.74	13.50	23.30	-	-	For low carbon 22%Cr-12%Ni stainless steel and dissimilar welding. 低碳 22%Cr-12%Ni 鋼，異材銲接。
SMG-310 STG-310	AWS A5.9 ER310 EN ISO 14343-A G/W 25 20	-	610	41	-		0.090	1.53	0.49	21.50	26.90	-	-	For 25%Cr-20%Ni stainless steel and dissimilar welding. 25%Cr-20%Ni 鋼，異材銲接。
SMG-312 STG-312	AWS A5.9 ER312 EN ISO 14343-A G/W 29 9	-	710	26	-		0.090	1.71	0.48	8.81	30.10	-	-	For 29%Cr-9%Ni stainless steel and dissimilar welding. 29%Cr-9%Ni 鋼，異材銲接。
SMG-316L STG-316L	AWS A5.9 ER316L EN ISO 14343-A G/W 19 12 3 L	-	580	40	-		0.020	1.45	0.51	11.50	18.20	2.60	-	For low carbon 18%Cr-12%Ni-2.5%Mo stainless steel welding. 低碳 18%Cr-12%Ni-2.5%Mo 鋼。
SMG-316LSi STG-316LSi	AWS A5.9 ER316LSi EN ISO 14343-A G/W 19 12 3 L Si	-	580	39	-		0.018	1.51	0.83	11.60	18.60	2.61	-	For low carbon 18%Cr-12%Ni-2.5%Mo stainless steel welding. 低碳 18%Cr-12%Ni-2.5%Mo 鋼。
SMG-317L STG-317L	AWS A5.9 ER317L EN ISO 14343-A G/W 18 15 3 L	-	570	41	-		0.012	1.32	0.53	13.50	19.60	3.20	-	For low carbon 18%Cr-12%Ni-3.5%Mo stainless steel welding. 低碳 18%Cr-12%Ni-3.5%Mo 鋼。
SMG-347 STG-347	AWS A5.9 ER347 EN ISO 14343-A G/W 19 9 Nb	-	620	40	-		0.030	1.38	0.61	9.31	19.40	-	Nb:0.48	For 18%Cr-9%Ni-Ti stainless steel welding. 18%Cr-9%Ni-Ti 鋼。
SMG-409Cb	AWS A5.9 ER409Cb	-	460	26	-		0.030	0.65	0.62	0.32	11.30	-	Nb:0.45	For welding AISI 409 , 409Ti with better corrosion resistance and strength at high temperature. 適合 AISI 409, 409Ti 於高溫環境提供較佳耐腐蝕表現。
SMG-410 STG-410	AWS A5.9 ER410 EN ISO 14343-A G/W 13	-	520	25	-		0.030	0.48	0.39	0.41	12.50	-	-	For welding of 13%Cr stainless steel. 13%Cr 鋼銲接。
SMG-410NM STG-410NM	AWS A5.9 ER410NiMo EN ISO 14343-A G/W 13 4	-	920	21	-		0.016	0.52	0.38	4.55	12.23	0.41	-	For welding of ASTM CA6NM or steels with similar chemical composition. 適合 ASTN CA6NM 或類似成分銲接。

Solid Wire 實心銲線

MAG,MIG,TIG

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm^2)	T.S.(N/mm^2)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
For Stainless Steel 不銹鋼實心銲線														
SMG-420 STG-420	AWS A5.9 ER420	-	520	25	-		0.310	0.42	0.38	0.32	13.10	-	-	For welding of high carbon 13%Cr stainless steel. 高碳 13%Cr 鋼。
SMG-430 STG-430	AWS A5.9 ER430 EN ISO 14343-A G/W 17	-	530	25	-		0.060	0.42	0.34	0.30	16.20	-	-	For welding of 17%Cr stainless steel. 17%Cr 鋼銲接。
SMG-439Ti STG-439Ti	AWS A5.9 ER439	-	505	40	-		0.030	0.65	0.53	0.18	18.30	-	Ti:0.42	For welding of 18%Cr stainless steel. 18%Cr 鋼銲接。
SMG-630 STG-630	AWS A5.9 ER630	-	990	10	-		0.030	0.61	0.59	4.83	16.40	-	Cu:3.6 Nb:0.23	For welding of 17%Cr-4%Ni precipitation stainless steel. 17%Cr-4%Ni 析出硬化型不鏽鋼。
SMG-2209 STG-2209	AWS A5.9 ER2209 EN ISO 14343-A G/W 22 9 3 N L	-	790	27	-		0.020	1.63	0.45	9.78	22.01	3.15	N:0.12	For welding alloy 2205 duplex stainless steel with resistance to pitting corrosion and crack. 22Cr 雙相不銹鋼，如 Alloy2205。
SMG-2594 STG-2594	AWS A5.9 ER2594 EN ISO 14343-A G/W 25 9 4 N L	-	860	25	-		0.013	0.60	0.40	9.0	24.8	4.0	N:0.25	For welding Alloy 2507 duplex stainless steel with resistance to pitting corrosion and crack. 25Cr 雙相不鏽鋼 , 如 Alloy 2507。
For Nickel Alloy Steel 鎳合金鋼實心銲線														
SMG-751 STG-751	AWS A5.14 ERNiCr-3 EN ISO 18274 S Ni 6082	-	672	42	-		0.030	2.70	0.11	Bal	20.03	-	Fe:1.3 Nb:2.52 Ti:0.3	It suits for Inconel , Incoloy dissimilar metals welding and overlaying . Similar to Inconel 82. Inconel ，Incolloy 及碳鋼堆銲與異材銲接，似 Inconel 82 銲材。
SMG-625 STG-625	AWS A5.14 ERNiCrMo-3 EN ISO 18274 S Ni 6625	-	786	42	-		0.010	0.03	0.07	65.24	22.18	8.67	Fe:0.2 Nb:3.61 Al:0.15 Ti:0.16	For Inconel 625 and dissimilar metals welding. Inconel 625、Alloy904L 銲接，異材銲接。
SMG-276 STG-276	AWS A5.14 ERNiCrMo-4 EN ISO 18274 S Ni 6276	-	745	41	-		0.010	0.40	0.05	Bal	15.67	15.96	Fe:5.91 W:3.12	For Hastelloy C and Hastelloy C-276 welding. Hastelloy C-276、鎳合金銲接及覆面銲接。
SMG-622 STG-622	AWS A5.14 ERNiCrMo-10 EN ISO 18274 S Ni 6022	-	751	38	-		0.008	0.40	0.04	Bal	21.52	13.54	Fe:3.1 W:3.07	For weld alloys of similar composition as well as dissimilar joints between Ni-Cr-Mo and stainless or low alloy steels. 銲接類似的合金或 ni-cr-mo 與不銹鋼的異材銲接。
SMG-400 STG-400	AWS A5.14 ERNiCu-7 EN ISO 18274 S Ni 4060	-	566	41	-		0.018	3.50	0.31	65.24	-	-	Fe:0.55 Al:0.028 Ti:1.56 Cu:Bal	Welding wire of Monel metal type . For welding of Monel metal , dissimilar metals , and overlaying. Monel 合金用，異材銲接用。
SMG-200 STG-200	AWS A5.14 ERNi-1 EN ISO 18274 S Ni 2061	-	475	37	-		0.020	0.31	0.37	96.14	-	-	Fe:0.07 Al:0.82 Ti:2.75 Cu:0.005	For welding of wrought and cast forms of commercially pure Nickel. 銲接鍛造與鑄造用純鎳工件。

SAW Wire , Flux 潛弧銲線、銲藥
SAW

SAW Wire , Flux 潛弧銲線、銲藥
SAW

Brand 品名	Classification 規格	Typical mechanical properties of weld metal 熔金機械性質一例					Typical chemical composition of weld metal (wt%) 熔金化學成份一例							Application 主要應用
		Y.P.(N/mm²)	T.S.(N/mm²)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
☐ For 490N/mm² High Tensile Steel 490N/mm² 級高張力鋼潛弧銲藥、銲線														
SF-38 SW-M12K	AWS A5.17 F7A0-EM12K EN ISO 14171-A S 38 2 AB S2Si	415	525	31	32(-30℃)		0.090	1.33	0.61	-	-	-	-	For single pass welding water pipe , pressure vessel with plate thickness less than 25mm. 適合板厚低於 25mm 的工件如水管，壓力容器的單道銲接。
SF-65 SW-M12K	AWS A5.17 F7A2-EM12K EN ISO 14171-A S 42 3 AB S2Si	460	560	29	55(-30℃)		0.080	1.61	0.53	-	-	-	-	For single pass or multiple passes welding for mild steel and 490N/mm² steel used in steel structure , shipbuilding , bridges , pressure vessel. 490N/mm² 級高張力鋼厚板，極厚板之壓力容器、造船、鋼骨、橋樑等之單層、多層銲接。
SF-65 SW-H14	AWS A5.17 F7A2-EH14 EN ISO 14171-A S 42 3 AB S4	490	585	30	65(-30℃)		0.080	1.72	0.24	-	-	-	-	For single pass or multiple passes welding for mild steel and 490N/mm² steel used in steel structure , shipbuilding , pressure vessel where higher mechanical properties required. 490N/mm² 級高張力鋼單、多層銲接用，優越的耐氣孔性、作業性及衝擊值。
SF-66 SW-M12K	AWS A5.17 F7A4/P4-EM12K EN ISO 14171-A S 42 5 FB S2Si	456	542	28	110(-50℃)		0.070	1.51	0.42	-	-	-	-	For single pass or multiple passes welding for mild steel and 490N/mm² steel used in steel structure, shipbuilding, bridges, pressure vessel. 490N/mm² 級高張力鋼厚板，極厚板之壓力容器、造船、鋼骨、橋樑等之單層、多層銲接。
SF-66 SW-H12K	AWS A5.17 F7A6/P6-EH12K EN ISO 14171-A S 46 5 FB S3Si	556	598	28	120(-50℃)		0.070	1.62	0.45	-	-	-	-	For single pass or multiple passes welding for mild steel and 490N/mm² steel used in steel structure, shipbuilding, bridges, pressure vessel. 490N/mm² 級高張力鋼厚板，極厚板之壓力容器、造船、鋼骨、橋樑等之單層、多層銲接。
☐ For ≧ 550N/mm² High Tensile Steel ≧ 550N/mm² 級高張力鋼潛弧銲藥、銲線														
SF-66 SW-60G	AWS A5.23 F8A8-EG-G EN ISO ISO 14171-A S 46 6 FB S3Si	572	605	29	87(-60℃)		0.054	1.29	0.21	-	-	0.46	-	For single pass or multiple passes welding for 590N/mm² steel used in steel structure , shipbuilding , pressure vessel where higher mechanical properties required. 590N/mm² 級高張力鋼單、多層銲接用，優越的耐氣孔性、作業性及衝擊值。
SF-68 SW-60G	AWS A5.23 F8A2-EG-G EN ISO 14171-A S 50 3 AB S2MO	578	638	29	71(-30℃)		0.070	1.63	0.52	-	-	0.21	-	For single pass or multiple passes welding for 590N/mm² steel used in steel structure , shipbuilding , pressure vessel where higher mechanical properties required. 590N/mm² 級高張力鋼單、多層銲接用，優越的耐氣孔性、作業性及衝擊值。
☐ For ≧ 550N/mm² High Tensile Steel ≧ 550N/mm² 級高張力鋼電熔渣銲接 (ESW)														
SF-60 SWE-60G	AWS A5.25 FES80-ES-G-EW	545	637	27	43(-30℃)		0.120	1.52	0.14	-	-	-	-	For ships, bridges and general welding. 造船、鋼構、橋樑等之銲接。

SAW Wire , Flux 潛弧銲線、銲藥

SAW

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		Y.P.(N/mm²)	T.S.(N/mm²)	E.L.%	IV J(℃)		C	Mn	Si	Ni	Cr	Mo	Others	
For Stainless Steel 不銹鋼潛弧銲藥、銲線														
SF-30 SW-308/308L	AWS A5.9 ER308/308L EN ISO 14343-A S 19 9 L	-	570	40	-		0.030	1.58	0.65	9.21	19.23	-	-	SF-30 is an alkaline agglomerated flux for welding stainless steel storage tank, for low carbon 18%Cr-8%Ni steel. SF-30 乃鹼性助銲劑用於不銹鋼儲槽與低碳 18Cr-8Ni 不銹鋼。
SF-30 SW-309/309L	AWS A5.9 ER309/309L EN ISO 14343-A S 23 12 L	-	567	41	-		0.030	1.48	0.62	13.32	23.25	-	-	For low Carbon 22%Cr-12%Ni alloy steel, and dissimilar steel. 低碳 -22Cr-12Ni 鋼用，異材銲接用。
SF-30 SW-316/316L	AWS A5.9 ER316/316L EN ISO 14343-A S 19 12 3 L	-	550	42	40(-196℃)		0.030	1.71	0.41	11.21	19.11	2.13	-	SF-30 is an alkaline agglomerated flux for welding low carbon 18%Cr-12%Ni-2.5%Mo stainless steel used for chemical vessels. SF-30 屬鹼性助銲劑可用於為成分低碳 18Cr-8Ni-2.5Mo 銲接如化學儲槽。
SF-33 SW-2209	AWS A5.9 ER2209 EN ISO 14343-A S 22 9 3 N L	-	815	25	-		0.030	1.27	0.49	8.94	22.04	2.85	N:0.14	SF-33 is an alkaline agglomerated flux for welding low carbon 22%Cr-9%Ni-3%Mo-N stainless steel used for UNS S31803(Alloy2205). SF-33 用於 UNS S31803 Alloy 2205 成分 22Cr-9Ni-3Mo-N。
For Stainless Steel Strip Electrodes 不銹鋼板帶 (SAW)														
SFB-S300 SB-308L	-	-	-	板帶 Strip 第二層 Second Pass			0.015 0.025	1.86 1.43	0.29 0.65	9.43 9.86	21.08 19.25	-	-	For welding low carbon 18%Cr-8%Ni steels with better corrosion resistance. 低碳 -18Cr-8Ni 鋼用。
SFB-S300 SB-309L	-	-	-	板帶 Strip 第一層 First Pass			0.016 0.024	1.84 1.25	0.32 0.53	13.75 11.83	23.51 20.22	-	-	For welding low Carbon 22%Cr-12%Ni alloy steel, and dissimilar steel. 低碳 -22Cr-12Ni 鋼用，異材銲接用。
SFB-S300 SB-316L	-	-	-	板帶 Strip 第二層 Second Pass			0.018 0.020	1.91 1.41	0.26 0.53	13.11 12.61	19.12 19.13	2.61 2.27	-	For welding low carbon 18%Cr-12%Ni-2.5%Mo steels with better corrosion resistance. 低碳 -18Cr-12Ni-2.5Mo 鋼用。
For Stainless Steel Strip Electrodes 不銹鋼板帶 (ESW)														
SFB-E300 SB-308L	-	-	-	板帶 Strip 第二層 Second Pass			0.015 0.019	1.86 1.33	0.29 0.42	9.43 11.83	21.08 20.45	-	-	For welding low carbon 18%Cr-8%Ni steels with better corrosion resistance. 低碳 -18Cr-8Ni 鋼用。
SFB-E300 SB-309L	-	-	-	板帶 Strip 第一層 First Pass			0.016 0.023	1.84 1.32	0.32 0.45	13.75 12.58	23.51 20.72	-	-	For low Carbon 22%Cr-12%Ni alloy steel, and dissimilar steel. 低碳 -22Cr-12Ni 鋼用，異材銲接用。
SFB-E300 SB-316L	-	-	-	板帶 Strip 第二層 Second Pass			0.018 0.021	1.91 1.45	0.26 0.42	13.11 12.73	19.12 19.25	2.61 2.42	-	For welding low carbon 18%Cr-12%Ni-2.5%Mo steels with better corrosion resistance. 低碳 -18Cr-12Ni-2.5Mo 鋼用。
For Hardfacing Steel 硬面鋼潛弧銲藥、銲線														
SF-80	-	-	-	-	-		-	-	-	-	-	-	-	Combination with hardfacing FCW SFH-XXS series. 搭配各種硬面鋼包藥銲線 SFH-XXS。
SF-82	-	-	-	-	-		-	-	-	-	-	-	-	Combination with hardfacing FCW SFH-22S. 搭配硬面鋼包藥銲線 SFH-22S。

Approvals of Sorex Products

產品認證一覽表

Remark（附註）：
ABS：American Bureau of Shipping 美國驗船協會
BV：Bureau Veritas 法國驗船協會
CCS：China Classification Society 中國船級社
CPR-CE MARK ：European Community (CE) Construction Products 歐盟建築材料產品認證
CR：CR Classification Society 中國驗船中心
DNV·GL：DNV GL Det Norske Veritas & Germanischer Lloyd AS GROUP 船級社
LR：Lloyd's Register Asia 勞氏驗船協會亞洲

NK：Nippon Kaiji Kyokai 日本海事協會
KR：Korean Register of Shipping 韓國船級社
RINA：Registro Italiano Navale 義大利船級學會
PRS: 波蘭船級社
C：CO2
M：75-80%Ar/bal CO2
A：Ar Gas

TYPE 類別	Brand Name 品名	AWS Code	Shield Gas 遮護氣體	Inspection Institute 檢驗機關											
				ABS	BV		CCS	CPR-CE MARK	CR	DNV-GL	LR	NK	KR	RINA	PRS
Carbon & Low-alloy Stick Electrode 碳鋼及低合金鋼手銲條	SM-03		–												
	SM-10	E6019	–												
	SM-13	E6013	–					EN ISO 2560-A - E 38 0 R 1 2							
	SL-50	E7016	–	AWS A5.1 E7016				EN ISO 2560-A - E 42 3 B 1 2 H5							
	SL-58	E7018	–	3Y H5				EN ISO 2560-A - E 42 3 B 3 2 H5			3Y H5				
	SLH-58	E7018-1H4	–	4YQ420 H5				EN ISO 2560-A - E 42 4 B 3 2 H5			4Y42 H5				
	SR-86B2	E8016-B2	–	AWS A5.5 E8016-B2											
	SR-96B3	E9016-B3	–	AWS A5.5 E9016-B3											
	SL-108M	E10018-M	–						E698-M1(MIL-10018-M1)						
Stainless Stick Electrode 不銹鋼手銲條	SS-308L	E308L-16	–					EN ISO 3581-A E 19 9 L R 1 2			304L m				
	SS-309L	E309L-16	–					EN ISO 3581-A E 23 12 L R 1 2			SS/CMn m				
	SS-310	E310-16	–												
	SS-312	E312-16	–					EN ISO 3581-A - E 29 9 R 1 2							
	SS-316L	E316L-16	–					EN ISO 3581-A - E 19 12 3 L R 1 2			316L m				
	SS-347	E347-16	–												
	SS-2209	E2209-16	–					EN ISO 3581-A E 22 9 3 N L R 1 2							
Carbon Flux Cored Wire 碳鋼包藥銲線	SFC-71	E71T-1C	C	3YSA H5	3YSMH5		3YS H5	EN ISO 17632-A - T42 2 P C1 1 H5	3YSH5	III YMS(H5)	3YS H5	KSW53G(C)H5	3YSG(C)H5	3YSM H5	3YS H5
	SFC-71	E71T-1M	M	3YSA H5	S3YMH5			EN ISO 17632-A - T42 2 P M21 1 H5		III YH5S	3YS H5			3YSM H5	3YS H5
	SFC-71J	E71T-1C-J	C	4YSA H5				EN ISO 17632:2015-A - T46 4 P C1 1 H5		IVY42MS(H5)	4YS H5				4YS H5
	SFC-71J	E71T-1M-J	M	4YSA H5				EN ISO 17632:2015-A - T46 4 P M21 1 H5		IVY42MS(H5)	4YS H5				4YS H5
	SFC-71M	E70C-6C/M	M/(C&M for CE Mark)	3YSA H5				EN ISO 17632-A - T42 4 M C1/M21 1 H5		IVY42MS(H5)	4YS H5				
	SFC-75	E71T-5C/M	C/(C&M for CE Mark)					EN ISO 17632-A - T42 3 B C1/M21 1 H5		III YH5S	3YS H5				
	SFC-70C	E70C-1C	C		SA3Y H5					IIIYMS(H5)		KSW53G(C)H5			
	SFC-81M	E80C-G	C					EN ISO 17632-A - T46 6 Z M C1 1 H5							
	SFC-81M	E80C-G	M					EN ISO 17632-A - T46 6 Z M M21 1 H5		V Y46MS(H5)					
Low-alloy Flux Cored Wire 低合金鋼包藥銲線	SFC-110	E111T1-GM	M	AWS A5.29 E111T1-GM-H4 AWS A5.29 E111T1-K3M-JH4											
	SFC-81Ni1	E81T1-NiC	C					EN ISO 17632-A - T46 3 1Ni P C1 1 H5		IV Y46MS(H5)					
	SFC-81K2	E81T1-K2C	C		5Y46S H5			EN ISO 17632-A - T46 6 1.5Ni P C1 1 H5		V Y46MS(H5)					
	SFC-81K2	E81T1-K2M	M					EN ISO 17632-A - T46 6 1.5Ni P M21 1 H5		V Y46MS(H5)					
Stainless Flux Cored Wire 不銹鋼包藥銲線	SFC-307	E307T1-1	C												
	SFC-308L	E308LT1-1	C/(C&M for CE Mark)	AWS A5.22 E308LT1-1	308L		304L	EN ISO 17633-A - T 19 9 L P C1/M21 2		VL 308L	304L S				
	SFC-309L	E309LT1-1	C/(C&M for CE Mark)	AWS A5.22 E309LT1-1	309L		309L	EN ISO 17633-A - T 23 12 L P C1/M21 2		VL 309L	SS/CMn S				
	SFC-309MoL	E309LMoT1-1	C	AWS A5.22 E309LMoT1-1				EN ISO 17633-A -T 23 12 2 L P C1 2							
	SFC-316L	E316LT1-1	C/(C&M for CE Mark)	AWS A5.22 E316LT1-1	316L		316L	EN ISO 17633-A - T 19 12 3 L P C1/M21 2		VL 316L	316L S				
	SFC-317L	E317LT1-1	C	AWS A5.22 E317LT1-1											
	SFC-347L	E347LT1-1	C	AWS A5.22 E347T1-1											
	SFC-410NiMo	E410NiMoT1-1	C												
	SFC-2209	E2209T1-1	C/(C&M for CE Mark)	AWS A5.22 E2209T1-1	2205		2205	EN ISO 17633-A - T 22 9 3 N L P C1/M21 2		Duplex Steel					
	SFC-316H	E316HT1-1	C							VL 316					
Carbon TIG & MIG Solid Wires 碳鋼實心銲線	STG-50	ER70S-G	A	AWS A5.18 ER70S-G											
	STG-56	ER70S-6	A	AWS A5.18 ER70S-6											
	SMG-6	ER70S-6	C / M	3Y400				EN ISO 14341-A-G 42 3 C1/M21 Z H5							
	SMG-60	ER80S-G	C / M					EN ISO 14341-A-G 46 4 C1/M21 Z H5		IVY42MS(H5)					
	SMG-60N	ER80S-G	C / M					EN ISO 14341-A-G 46 6 C1/M21 Z H5		Y46MS(H5)					
	SMG-101M	–	C					EN ISO 14341-A-G 46 6 C1/M21 Z H5	CR-E69S-2(MIL-100S-1)						
Nickel-Alloy Solid Wire 鎳合金鋼實心銲線	STG-625	ERNiCrMo-3	Ar	AWS A5.14-2018 ERNiCrMo-3			9Ni								
Stainless Steel Solid Wire 不銹鋼實心銲線	STG-2594	ER2594	Ar	AWS A5.9 -2012 ER2594			2750								
Carbon Steel Submerged Arc Consumables 碳鋼潛弧銲材	SF-65 x SW-M12K	F7A2-EM12K	–	3YM H10				EN ISO 14171-A-S 42 3 AB S2Si	3YM H10	IIIYM H5	3YM H10	KAW53MH10		3YM H5	3YM H5
	SF-66 x SW-H12K	F7A4-EH12K	–					EN ISO 14171-A-S 46 5 FB S3Si		IVY42M H5					
	SF-68 x SW-60G	F8A2-EG-G	–					EN ISO 14171-A-S 46 3 AB S2Mo							
	SF-66 x SW-60G	F8A8-EG-G	–					EN ISO 14171-A-S 46 6 FB S3Si H5		V Y46M(H5)					
	SF-70XSW-101M	–	–						CR-E69S-5/E69S-1F						

Please refer to our website for latest product approvals. 最新產品認證資訊，請參考公司網站

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