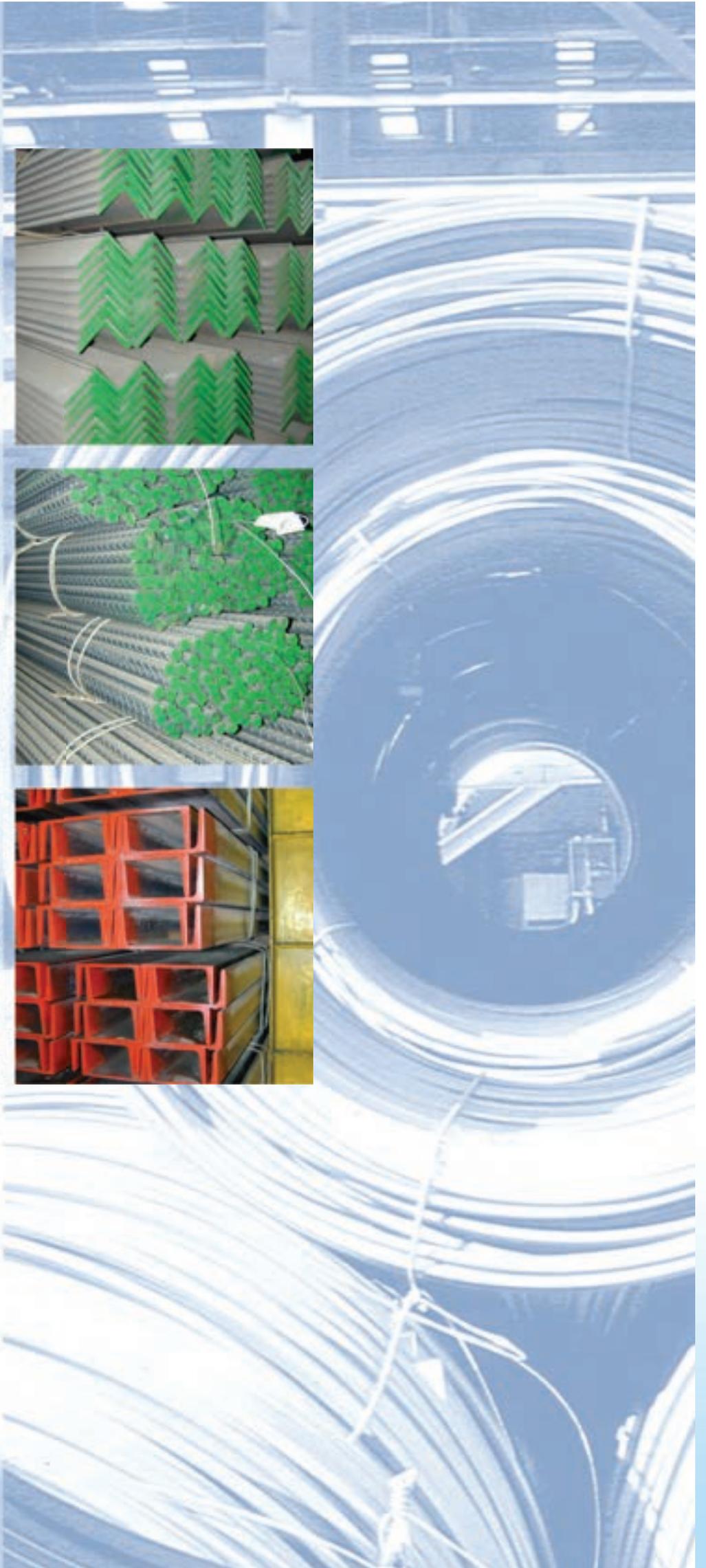
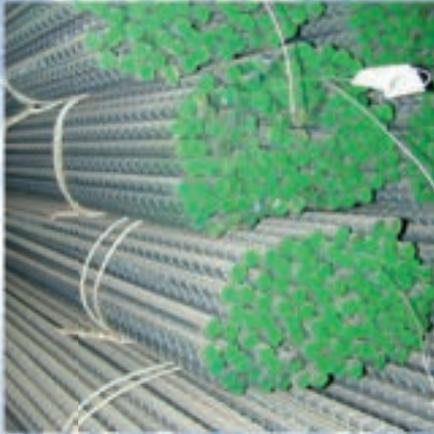
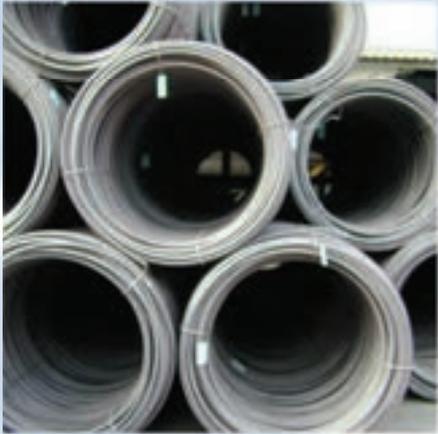


產品手冊

豐興鋼鐵股份有限公司
FENG HSIN STEEL CO., LTD.





使用說明

USER GUIDE

- 一、本產品手冊僅供參考，規格部份請以各規格協會出版之規格書為準。
The contents of this catalog are for reference only. Customers are urged to consult the specifications published by the corresponding Associations.
- 二、本手冊中可產製規格、訂貨需註明事項、標記及包裝之內容以本公司實際生產狀況為準。訂貨前，可產製產品規格與尺寸請與各營業處確認詳細狀況。
Information on the available steel grades, sizes and marking as shown herein may be updated without notice to comply with actual production situations. Before placing an order, please confirm with the sales office the dimensions and specifications of products that can be produced.
- 三、您如未能於手冊內尋得所需之鋼料規格、或有任何關於鋼料規格、鋼材之最小訂購量及交貨期之詢問，請逕向下列單位洽詢。
We encourage you to contact our Head Office should you have any questions concerning steel specifications and/or ordering requirements. Phone numbers are listed below for your convenience.

1. 訂交貨 (ORDER)

| 產品 (PRODUCT) | | 銷售課 (MARKETING SECTION) |
|---|--------------------|---|
| 一般結構用 〔GENERAL STRUCTURE〕 | 圓棒鋼 (ROUND BAR) | 營業三處 (MARKETING DEPARTMENT III) 中區型鋼銷售課 (CENTRAL REGIONAL STRUCTURAL STEEL SALES SECTION) TEL : (04)25565101 EXT. 2176~2179 FAX : (04)25573878 台北聯絡處 (TAIPEI OFFICE) TEL : (02)25613611 FAX : (02)25630092 高雄聯絡處 (KAOHSIUNG OFFICE) TEL : (07)2412368 FAX : (07)2412557 |
| | 角鋼 (ANGLE) | |
| | 槽鋼 (CHANNEL) | |
| | 方鋼 (SQUARE) | |
| | 扁鋼 (FLAT) | |
| 鋼筋混凝土用鋼筋 〔CONCRETE REINFORCEMENT BAR〕 | | 營業三處 (MARKETING DEPARTMENT III) 鋼筋銷售課 (REBAR MARKETING SECTION) TEL : (04)25565101 EXT.2181~2185 台北聯絡處 (TAIPEI OFFICE) TEL : (02)25613611 FAX : (02)25630092 |
| 特殊鋼 (SPECIAL BAR) | | 營業一處 (MARKETING DEPARTMENT I) 條線銷售課 (SPECIAL BAR MARKETING SECTION) TEL : (04)25565101 EXT.2164~2169 FAX : (04)25565110 |
| 冷鍛 (打) 用 〔COLD FORGING (HEADING)〕 | 圓棒鋼 (ROUND BAR) | |
| | 扁鋼 (FLAT) | |
| 熱鍛用 〔HOT FORGING〕 機械構造用 〔MACHINE STRUCTURE〕 易切削 〔FREE CUTTING〕 | 方鋼 (SQUARE) | |
| 外銷 〔EXPORT OF ALL ABOVE PRODUCTS〕 | | 營業二處 (MARKETING DEPARTMENT II) 國外課 (EXPORT MARKETING) TEL : (04)25565101 EXT.2150~2153 |

註：即時可供應鋼種及尺寸資訊查詢詳見豐興網站(<http://www.fenghsin.com.tw>)

2. 鋼料規格 (SPECIFICATION)

冶金研發處 (METALLURGY RESEARCH & DEVELOPMENT DEPARTMENT)

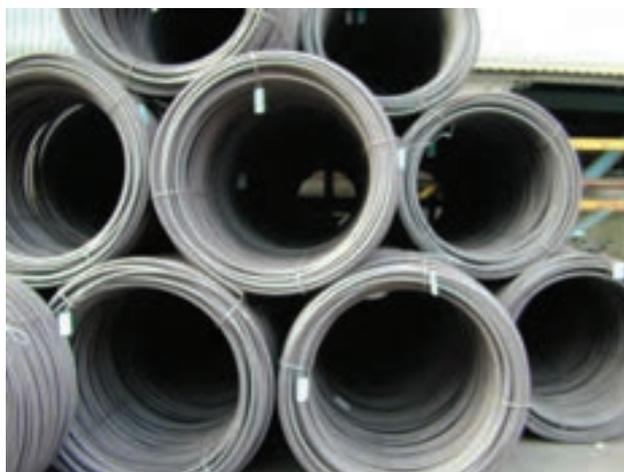
品質保證課 (QUALITY ASSURANCE SECTION) : (04)25565101 EXT.2221,2222,2351,2225,2226

目錄 Table Of Contents

| | |
|--|----|
| 1. 圓棒鋼 (ROUND BAR) | 01 |
| 1.1 可產製尺寸 (Available Sizes) | 01 |
| 1.2 可產製鋼種 (Available Grades) | 02 |
| 1.3 化學成份 (Chemical Requirements) | 03 |
| 1.4 許可差 (Tolerance) | 04 |
| 1.5 標記及包裝 (Standard Marking and Packing) | 05 |
| 2. 角鋼 (ANGLE) | 06 |
| 2.1 可產製尺寸 (Available Sizes) | 06 |
| 2.2 可產製鋼種 (Available Grades) | 06 |
| 2.3 化學成份及機械性質 (Chemical and Mechanical Requirements) | 07 |
| 2.4 形狀及尺度許可差 (Shape and Tolerance on Dimension) | 08 |
| 2.5 標記及包裝 (Standard Marking and Packing) | 08 |
| 3. 槽鋼 (CHANNEL) | 12 |
| 3.1 可產製尺寸 (Available Sizes) | 12 |
| 3.2 可產製鋼種 (Available Grades) | 12 |
| 3.3 化學成份及機械性質 (Chemical and Mechanical Requirements) | 12 |
| 3.4 形狀及尺度許可差 (Shape and Tolerance on Dimension) | 13 |
| 3.5 標記及包裝 (Standard Marking and Packing) | 14 |
| 4. 扁鋼 (FLAT) | 16 |
| 4.1 可產製尺寸 (Available Sizes) | 16 |
| 4.2 可產製鋼種 (Available Grades) | 16 |
| 4.3 化學成份及機械性質 (Chemical and Mechanical Requirements) | 17 |
| 4.4 形狀及尺度許可差 (Shape and Tolerance on Dimension) | 18 |
| 4.5 標記及包裝 (Standard Marking and Packing) | 19 |
| 5. 方鋼 (SQUARE BAR) | 22 |
| 5.1 可產製尺寸 (Available Sizes) | 22 |
| 5.2 可產製鋼種 (Available Grades) | 22 |
| 5.3 化學成份及機械性質 (Chemical and Mechanical Requirements) | 22 |
| 5.4 許可差 (Tolerance) | 23 |
| 5.5 標記及包裝 (Standard Marking and Packing) | 23 |
| 6. 鋼筋 (REBAR) | 24 |
| 6.1 可產製尺寸 (Available Sizes) | 24 |
| 6.2 可產製鋼種 (Available Grades) | 25 |
| 6.3 化學成份及機械性質 (Chemical and Mechanical Requirements) | 25 |
| 6.4 形狀及尺度許可差 (Shape and Tolerance on Dimension) | 27 |
| 6.5 標記及包裝 (Standard Marking and Packing) | 28 |
| 7. 品保實績 (QA) | 31 |



【一、圓棒鋼 ROUND BAR】



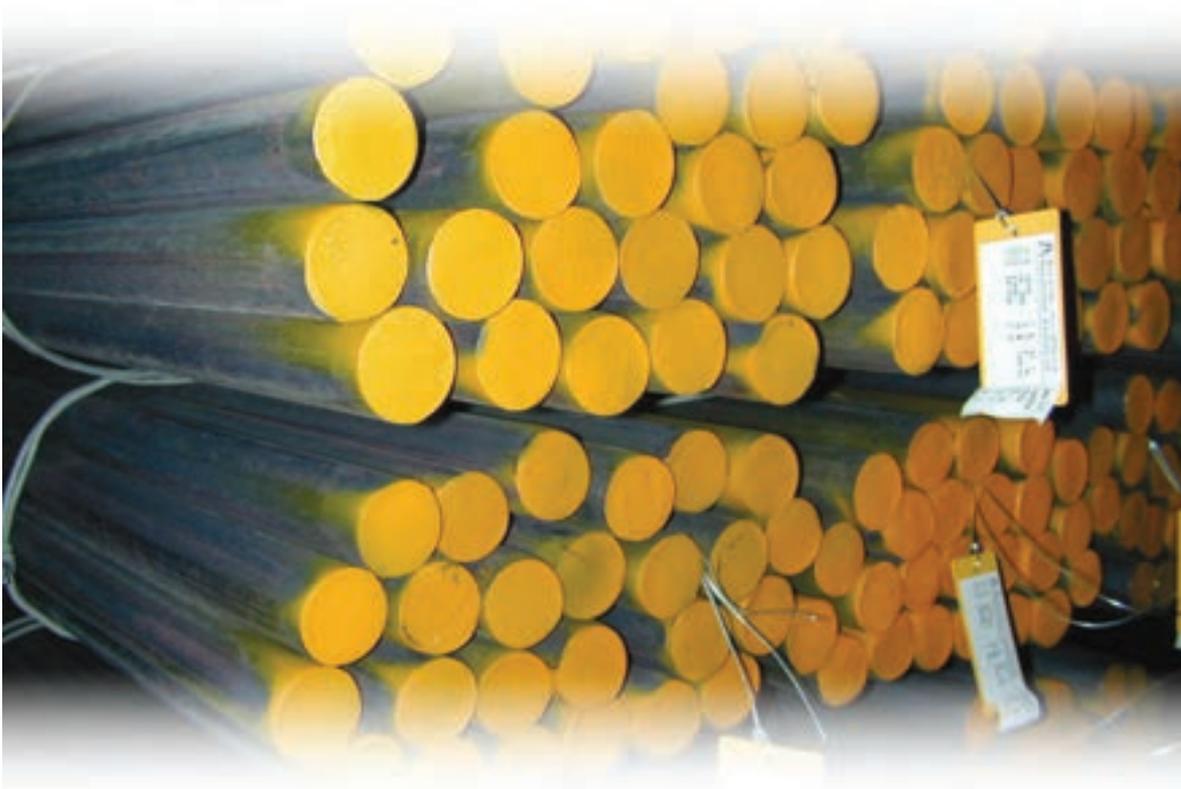
1.1 可產製尺寸 (Available Sizes)

| | 直棒鋼 (Straight Bar) | 捲狀棒鋼 (Bar in Coil) | |
|--------------------------|--------------------------|-------------------------|--------|
| 直徑 (D) | 9.0-103mm | 13-50mm | |
| 盤元內徑 (I.D.) | — | 950mm | 1000mm |
| 盤元外徑 (O.D.) | — | 1250mm | 1350mm |
| 直棒長度 (L) | 5-12m | — | |
| 包裝重量 (Weight) | 9.0-9.5mm ≒ 1,200kg | — | |
| | 11-100mm ≒ 1,500-2,000kg | 13-50mm ≒ 1,700-2,250kg | |
| | 101-103mm ≒ 1700-2250kg | | |
| 盤捲方向 (Coiling Direction) | — | 順時針方向 (Clockwise) | |



1.2 可產製鋼種 (Available Grades)

| | 冷打 (鍛) 碳鋼 (Carbon Steels for Cold Heading (Forging)) | 機械構造碳鋼 (Carbon Steels for Machine Structural Use) | 機械構造合金鋼 (Low Alloy Steels for Machine Structural Use) | 快削鋼 (Free Cutting Carbon Steels) | 一般結構用鋼 (Rolled Steel for General Structure) |
|------------------|--|--|--|--|--|
| CNS | 8694 SWRCH8A~SWRCH22A | 3828 S10C~S58C | 3271 SNM220 3229 SCM415~SCM440 | 4004 SUM23 | 2473 SS330~SS400 SS490~SS540 |
| JIS | G3507 SWRCH8A~SWRCH22A | G4051 S10C~S58C | G4053 SCM415~SCM440 SNM220 G4052 SCM415H~SCM440H G4801 SUP9 | G4804 SUM23 | G3101 SS330~SS400 SS490~SS540 |
| SAE F.H. SPEC | 1008~1060,1541,1541H, 1552 | | 8620, 8640 4140, 5120 | 1141 | — |
| ASTM | — | | — | — | A572, A36 A709 |
| F.H. SPEC | 10B21,10B33,10B33M, 1035ACR,1040ACR, 1040ACRM, 50BV30, 25CNCV | 1015S1, 1045S1, 1015S2, 1021MN 1026MN, 15B32 1021MA, S55C MGW | 6135, 6140 20MNV56 | 1215MS | TC275 |
| EN 10025-2 | — | — | — | — | S235JR, S235J0 S235J2, S275JR S275J0, S275J2 S355JR, S355J0 S355J2, S355K2 |
| EN10267 | — | — | 30MNV56 | — | — |
| AS 3679.1 | — | — | — | — | GR300 |





1.3 JIS 與 SAE 化學成份參考表 (Chemical Requirements)

| 種類記號 (Symbol) | 化學成分 (Composition), % | | | | | | | | | | | |
|------------------|-----------------------|-----------|-----------|-----------|-------------|-----------|---|-----------|-----------|-----------|----------|-----------|
| | C | Si | Mn | P | S | Ni | Cr | Mo | Al | Cu | Pb | |
| 日本工業標準 JIS | SWRCH8R | 0.10 max | - | 0.60 max | 0.040 max | 0.040 max | - | - | - | - | - | - |
| | SWRCH10R | 0.08-0.13 | - | 0.30-0.60 | 0.040 max | 0.040 max | - | - | - | - | - | - |
| | SWRCH8A | 0.10 max | 0.10 max | 0.60 max | 0.030 max | 0.035 max | - | - | - | 0.020 min | - | - |
| | SWRCH10A | 0.08-0.13 | 0.10 max | 0.30-0.60 | 0.030 max | 0.035 max | - | - | - | 0.020 min | - | - |
| | SWRCH15A | 0.13-0.18 | 0.10 max | 0.30-0.60 | 0.030 max | 0.035 max | - | - | - | 0.020 min | - | - |
| | S15C | 0.13-0.18 | 0.15-0.35 | 0.30-0.60 | 0.030 max | 0.035 max | Cu 0.30%max Ni 0.20%max Cr 0.20%max Ni+Cr 0.35%max | | | | | |
| | S35C | 0.32-0.38 | 0.15-0.35 | 0.60-0.90 | 0.030 max | 0.035 max | | | | | | |
| | S45C | 0.42-0.48 | 0.15-0.35 | 0.60-0.90 | 0.030 max | 0.035 max | | | | | | |
| | S50C | 0.47-0.53 | 0.15-0.35 | 0.60-0.90 | 0.030 max | 0.035 max | | | | | | |
| | S55C | 0.52-0.58 | 0.15-0.35 | 0.60-0.90 | 0.030 max | 0.035 max | | | | | | |
| | SUM23 | 0.09 max | - | 0.75-1.05 | 0.040-0.090 | 0.26-0.35 | - | - | - | - | - | - |
| | SUM24L | 0.15 max | - | 0.85-1.15 | 0.040-0.090 | 0.26-0.35 | - | - | - | - | - | 0.10-0.35 |
| | SCM415 | 0.13-0.18 | 0.15-0.35 | 0.60-0.90 | 0.030 max | 0.030 max | 0.25 max | 0.90-1.20 | 0.15-0.25 | - | 0.30 max | - |
| | SCM435 | 0.33-0.38 | 0.15-0.35 | 0.60-0.90 | 0.030 max | 0.030 max | 0.25 max | 0.90-1.20 | 0.15-0.30 | - | 0.30 max | - |
| | SCM440 | 0.38-0.43 | 0.15-0.35 | 0.60-0.90 | 0.030 max | 0.030 max | 0.25 max | 0.90-1.20 | 0.15-0.30 | - | 0.30 max | - |
| SNCM220 | 0.17-0.23 | 0.15-0.35 | 0.60-0.90 | 0.030 max | 0.030 max | 0.40-0.70 | 0.40-0.60 | 0.15-0.25 | - | 0.30 max | - | |
| 美國汽車工程師協會 SAE | 1008 | 0.10 max | - | 0.30-0.50 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 1010 | 0.08-0.13 | - | 0.30-0.60 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 1015 | 0.13-0.18 | - | 0.30-0.60 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 1021 | 0.18-0.23 | - | 0.60-0.90 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 1026 | 0.22-0.28 | - | 0.60-0.90 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 1035 | 0.32-0.38 | - | 0.60-0.90 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 1045 | 0.43-0.50 | - | 0.60-0.90 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 1050 | 0.48-0.55 | - | 0.60-0.90 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 1055 | 0.50-0.60 | - | 0.60-0.90 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 12L14 | 0.15 max | - | 0.85-1.15 | 0.040-0.090 | 0.26-0.35 | - | - | - | - | - | 0.15-0.35 |
| | 1215 | 0.09 max | - | 0.75-1.05 | 0.040-0.090 | 0.26-0.35 | - | - | - | - | - | - |
| | 1541 | 0.36-0.44 | - | 1.35-1.65 | 0.030 max | 0.050 max | - | - | - | - | - | - |
| | 4140 | 0.38-0.43 | 0.15-0.35 | 0.75-1.00 | 0.030 max | 0.040 max | 0.25 max | 0.80-1.10 | 0.15-0.25 | - | 0.35 max | - |
| 8620 | 0.18-0.23 | 0.15-0.35 | 0.70-0.90 | 0.030 max | 0.040 max | 0.40-0.70 | 0.40-0.60 | 0.15-0.25 | - | 0.35 max | - | |



1.4 許可差 (Tolerance)

1.4.1 直徑許可差 (Permissible Variations in Diameter)

單位(Unit) : mm

| 規格 (Spec.) | 直徑 (Diameter) | 直徑許可差 (Diameter Tolerance) | 真圓度 (Out of Round) |
|------------------------|---------------------|----------------------------|--------------------|
| CNS 8279 JIS G3191 | $D < 16$ | ± 0.40 | 0.56 max |
| | $16 \leq D < 28$ | ± 0.50 | 0.70 max |
| | $28 \leq D$ | $\pm 1.8\% * D$ | $2.52\% * D$ max |
| JIS G4051 JIS G4053 | $D \leq 26$ | ± 0.40 | 0.56 max |
| | $26 < D$ | $\pm 1.5\% * D$ | $2.1\% * D$ max |
| JIS G3507 | $D \leq 15$ | ± 0.30 | 0.40 max |
| | $15 < D \leq 25$ | ± 0.40 | 0.50 max |
| | $32 < D \leq 50$ | ± 0.60 | 0.70 max |
| SAE | $D \leq 7$ | ± 0.13 | 0.20 max |
| | $7 < D \leq 11$ | ± 0.15 | 0.22 max |
| | $11 < D \leq 15$ | ± 0.18 | 0.27 max |
| | $15 < D \leq 19$ | ± 0.20 | 0.30 max |
| | $19 < D \leq 250$ | $\pm 1.0\% * D$ | $1.5\% * D$ max |
| JIS G4801 | $10 \leq D < 16$ | ± 0.25 | 0.25 max |
| | $16 \leq D < 21$ | ± 0.30 | 0.30 max |
| | $21 \leq D < 34$ | ± 0.40 | 0.40 max |
| | $34 \leq D < 46$ | ± 0.50 | 0.50 max |
| | $46 \leq D < 75$ | ± 0.70 | 0.70 max |
| | $75 \leq D \leq 80$ | ± 1.00 | 1.00 max |

1.4.2 長度許可差 (Permissible Variations in Length)

單位(Unit) : mm

| 規格 (Spec.) | 長度 (Length) | 長度許可差 (Length Tolerance) | | | |
|--|------------------------|--|------------------|-------------------|--------------------|
| | | $D \leq 25$ | $25 < D \leq 50$ | $50 < D \leq 125$ | $125 < D \leq 250$ |
| SAE | $3000 \leq L < 6000$ | +20, 0 | +25, 0 | +40, 0 | +65, 0 |
| | $6000 \leq L < 9000$ | +35, 0 | +40, 0 | +45, 0 | +70, 0 |
| | $9000 \leq L < 12000$ | +45, 0 | +50, 0 | +60, 0 | +75, 0 |
| | $12000 \leq L < 18000$ | +60, 0 | +65, 0 | +70, 0 | +85, 0 |
| JIS G3191 G4051 G4053 G4801 CNS 8279 | $L \leq 7000$ | +40, 0 | | | |
| | $7000 < L$ | 每增加1米，容許差上限增加5mm (Add 5mm to plus side tolerance for every increase of 1m or its fraction) | | | |

1.4.3 直度許可差 (Permissible Variations in Straightness)

| 規格 (Spec.) | 許可差 (Tolerance) | 摘要 (Remark) | |
|-----------------------------|-----------------|---------------------------------|-------------------------------|
| SAE | 6mm/1.5m | $0.40\% \times L$ | 一般直度要求 (Normal Straightness) |
| | 3mm/1.5m | $0.2\% \times L$ | 特殊直度要求 (Special Straightness) |
| JIS G4051 G4053 G4801 | 3mm/1m | $3\text{mm}/1\text{m} \times L$ | |

註：本公司產品尺寸公差以CNS及JIS規格為主，非上述規格者須由買賣雙方協議。

Note : The tolerance for our company's products is to CNS or JIS standard. Other standards must be by agreement between the buyer and seller.



1.5 標記及包裝 (Standard Marking and Packing)

1.5.1 鋼種顏色標示 (Color Marking on Section and Tag)

| | 適用鋼種 (Steel grade) | 顏色 (Color) | 摘要 (Remark) |
|----------------|--|-------------------------|---|
| SAE/F.H. SPEC. | 1008 A, 1008AM1, 1012 A 1008AM4, 1010 A, 1010AM1, 1010AM4 | 淺藍色 (Light sky blue) | 冷打低碳鋼 (Low carbon steels for cold heading) |
| | 1015 A, 1015 K, 1018 A/AK, 1018 K, 1021 K, 1021MN, 1022A, 1025 K, 1026 K, 1026MN, 1015S1, 1015S2 1021MA | 白(White) | 低碳鋼 (Low carbon steels) |
| | 1030 K, 1035 K, 1040 K, 1045 K/AK, 1050 K/AK, 1055 K/AK, 1035ACR, 1040ACR/ACRM, 1045S1, 1541(H), 1552, 1141, S55C MGW | 黃(Yellow) | 中碳鋼 (Middle carbon steels) |
| | 10B21, 50BV30, 15B32, 25CNCV | 綠(Green) | 低合金鋼 (Low alloy steels) |
| | 4140 | 棕(Brown) | |
| | 8620, 8640 | 紅(Red) | |
| | 6135, 6140, 10B33, 10B33M, 20MNV6 | 灰(Gray) | |
| | 1215MS | 粉紅(Pink) | |
| | | SUM23 | 紫白(Purple-white) |

1.5.2 直棒鋼六米包裝 (Packing of Round Bar in 6m Length)

| 直徑D (mm) | 單位重量 (kg/m) | 單支重量 (kg/pcs) | 包裝支數* (pcs/bdl) | 包裝重量* (kg/bdl) | 直徑D (mm) | 單位重量 (kg/m) | 單支重量 (kg/pcs) | 包裝支數* (pcs/bdl) | 包裝重量* (kg/bdl) |
|-------------|----------------|------------------|--------------------|-------------------|-------------|----------------|------------------|--------------------|-------------------|
| 9 | 0.499 | 2.99 | 400 | 1196 | 52 | 16.7 | 100 | 20 | 2000 |
| 9.5 | 0.557 | 3.34 | 359 | 1199 | 53 | 17.3 | 104 | 19 | 1976 |
| 10 | 0.617 | 3.70 | 325 | 1202 | 55 | 18.7 | 112 | 18 | 2016 |
| 11 | 0.746 | 4.48 | 335 | 1501 | 57 | 20.0 | 120 | 17 | 2040 |
| 12 | 0.888 | 5.33 | 281 | 1498 | 60 | 22.2 | 133 | 15 | 1995 |
| 13 | 1.04 | 6.24 | 240 | 1498 | 62 | 23.7 | 142 | 14 | 1988 |
| 14 | 1.21 | 7.26 | 207 | 1503 | 65 | 26.0 | 156 | 13 | 2028 |
| 15 | 1.39 | 8.34 | 240 | 2002 | 67 | 27.7 | 166 | 12 | 1992 |
| 16 | 1.58 | 9.48 | 211 | 2000 | 70 | 30.2 | 181 | 11 | 1991 |
| 17 | 1.78 | 10.7 | 187 | 2001 | 72 | 32.0 | 192 | 10 | 1920 |
| 18 | 2.00 | 12.0 | 167 | 2004 | 74 | 33.8 | 203 | 10 | 2030 |
| 19 | 2.23 | 13.4 | 149 | 1997 | 75 | 34.7 | 208 | 10 | 2080 |
| 20 | 2.47 | 14.8 | 135 | 1998 | 78 | 37.5 | 225 | 9 | 2025 |
| 21 | 2.72 | 16.3 | 123 | 2005 | 80 | 39.5 | 237 | 9 | 2133 |
| 22 | 2.98 | 17.9 | 112 | 2005 | 82 | 41.5 | 249 | 8 | 1992 |
| 23 | 3.26 | 19.6 | 102 | 1999 | 85 | 44.5 | 267 | 8 | 2136 |
| 24 | 3.55 | 21.3 | 94 | 2002 | 87 | 46.7 | 280 | 7 | 1960 |
| 25 | 3.85 | 23.1 | 87 | 2010 | 90 | 49.9 | 299 | 7 | 2093 |
| 26 | 4.17 | 25.0 | 80 | 2000 | 92 | 52.2 | 313 | 6 | 1878 |
| 27 | 4.49 | 26.9 | 74 | 1991 | 95 | 55.6 | 334 | 6 | 2004 |
| 28 | 4.83 | 29.0 | 69 | 2001 | 100 | 61.7 | 370 | 5 | 1850 |
| 30 | 5.55 | 33.3 | 60 | 1998 | 103 | 65.4 | 392 | 5 | 1960 |
| 32 | 6.31 | 37.9 | 53 | 2009 | - | - | - | - | - |
| 34 | 7.13 | 42.8 | 47 | 2012 | - | - | - | - | - |
| 36 | 7.99 | 47.9 | 42 | 2012 | - | - | - | - | - |
| 38 | 8.90 | 53.4 | 37 | 1976 | - | - | - | - | - |
| 40 | 9.87 | 59.2 | 34 | 2013 | - | - | - | - | - |
| 42 | 10.9 | 65.4 | 31 | 2027 | - | - | - | - | - |
| 44 | 11.9 | 71.4 | 28 | 1999 | - | - | - | - | - |
| 45 | 12.5 | 75.0 | 27 | 2025 | - | - | - | - | - |
| 46 | 13.0 | 78.0 | 26 | 2028 | - | - | - | - | - |
| 48 | 14.2 | 85.2 | 23 | 1960 | - | - | - | - | - |
| 50 | 15.4 | 92.4 | 22 | 2033 | - | - | - | - | - |

*: 表包裝之目標值 (Aim value)



【二、角鋼 ANGLE】



2.1 可產製尺寸 (Available Sizes)

| 角鋼 (Angle) |
|---------------------|
| 邊長 (B) : 25mm~100mm |
| 厚度 (t) : 2.3mm~13mm |
| 長度 (L) : 5.3m~13m |

2.2 可產製鋼種 (Available Grade)

| 分類 (Division) | 規格 (Spec.) | 材質記號 (Symbol) |
|--------------------------------------|---------------|----------------------------------|
| 一般結構用 (General Structure) | CNS 2473 | SS400, SS490, SS540 |
| | JIS G3101 | |
| | ASTM A36 | A36M/A36 |
| | AS/NZS 3679.1 | GR300, GR350L0 |
| 銲接/建築結構用 (Welded/Buliding Structure) | CNS 2947 | SM400A, SM490A |
| | JIS G3106 | |
| | CNS 13812 | SN400B, SN490B |
| | JIS G3136 | |
| | ASTM A572 | Grade 50 type 2, Grade 65 type 2 |
| | ASTM A709 | Grade 50 type 2 |
| 結構用 (Structure) | EN 10025-2 | S235JR, S235J0, S235J2 |
| | | S275JR, S275J0, S275J2 |
| | | S355JR, S355J0, S355J2, S355K2 |

2.3 化學成份及機械性質 (Chemical and Mechanical Requirements)

2.3.1 化學成份 (Chemical Requirements)

| 規格 (Spec.) | 材質記號 (Symbol) | 化學成份 (Composition) % | | | | | |
|---------------|----------------------|----------------------|-----------|-----------------------|-----------|---------|-----------|
| | | C | Mn | P | S | Si | B |
| CNS 2473 | SS400, SS490 | - | - | 0.050max | 0.050max | - | 0.0007max |
| | SS540 | 0.30max | 1.60max | 0.040max | 0.040max | - | 0.0007max |
| CNS 2947 | SM400A | 0.26max | 2.5°Cmin | 0.035max | 0.035max | - | 0.0007max |
| | SM490A | 0.20max | 1.65max | 0.035max | 0.035max | 0.55max | 0.0007max |
| CNS 13812 | SN490B | 0.18max | 1.65max | 0.030 max | 0.015 max | 0.55max | 0.0007max |
| JIS G3101 | SS400, SS490 | - | - | 0.050max | 0.050max | - | - |
| | SS540 | 0.30max | 1.60max | 0.040max | 0.040max | - | - |
| JIS G3106 | SM400A | 0.23max | 2.5°Cmin | 0.035max | 0.035max | - | - |
| | SM490A | 0.20max | 1.65max | 0.035max | 0.035max | 0.55max | - |
| JIS G3136 | SN400B | 0.20max | 0.60~1.50 | 0.030max | 0.015max | 0.35max | - |
| | SN490B | 0.18max | 1.65max | 0.030max | 0.015max | 0.55max | - |
| ASTM A36 | A36M/A36 | 0.26max | - | 0.040 max | 0.050 max | 0.40max | - |
| ASTM A572 | Grade 50 type 2 | 0.23max | 1.35max | 0.040 max | 0.050 max | 0.40max | - |
| | Grade 65 type 2 | 0.26max | 1.35max | 0.040 max | 0.050 max | 0.40max | - |
| ASTM A709 | Grade 50 type 2 | 0.23max | 1.35max | 0.040 max | 0.050 max | 0.40max | - |
| AS/NZS 3679.1 | GR300 | 0.25max | 1.60max | 0.040 max | 0.040 max | 0.50max | - |
| | GR350L0 | 0.22max | 1.60max | 0.040 max | 0.040 max | 0.50max | - |
| EN 10025-2 | S235JR/S235J0/S235J2 | 0.17max | 1.40max | 0.035/0.030/0.035 max | | - | - |
| | S275JR | 0.21max | 1.50max | 0.035 max | 0.035 max | - | - |
| | S275J0/S275J2 | 0.18max | 1.50max | 0.030 /0.025max | | - | - |
| | S355JR | 0.24max | 1.60max | 0.035 max | 0.035 max | 0.55max | - |
| | S355J0/S355J2/S355K2 | 0.20max | 1.60max | 0.030/0.025/0.025 max | | 0.55max | - |

2.3.2 機械性質 (Mechanical Requirements)

| 規格 (Spec.) | 材質記號 (Symbol) | 降伏強度 (Y.S) N/mm ² (ksi) | | 抗拉強度 (T.S) N/mm ² (ksi) | 伸長率 (Elongation)% | 彎曲試驗 (Bending)180° 內側半徑 | 衝擊試驗 (Impact test) |
|------------------------|--------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|----------------------|-------------------------------|-----------------------|
| | | t ≤ 16 | 16 < t ≤ 40 | | | | |
| CNS 2473 JIS G3101 | SS400 | 245min | 235min | 400~510 | (B) ≥ 40 | 1.5*t OK | — |
| | | | | | 21min[t ≤ 5] | | |
| | | | | | 17min[5 < t ≤ 16] | | |
| | SS490 | 285min | 275min | 490~610 | (B) ≥ 40 | 2.0*t OK | — |
| | | | | | 19min[t ≤ 5] | | |
| | | | | | 15min[5 < t ≤ 16] | | |
| SS540 | 400min | 390min | 540min | (B) ≥ 40 | 2.0*t OK | — | |
| | | | | 16min[t ≤ 5] | | | |
| | | | | 13min[5 < t ≤ 16] | | | |
| CNS 2947 JIS G3106 | SM400A | 245min | 235min | 400~510 | (B) ≥ 40 | — | — |
| | | | | | 23min[t ≤ 5] | | |
| | | | | | 18min[5 < t ≤ 16] | | |
| | SM490A | 325min | 315min | 490~610 | (B) ≥ 40 | — | — |
| | | | | | 22min[t ≤ 5] | | |
| | | | | | 17min[5 < t ≤ 16] | | |
| CNS 13812 JIS G3136 | SN400B | 6 ≤ t < 12 235min | 12 ≤ t ≤ 40 235~355 (降伏比80%以下) | 400~510 | (B) ≥ 40 | — | 依規格 |
| | | | | | 18min[6 ≤ t ≤ 16] | | |
| | SN490B | 6 ≤ t < 12 325min | 12 ≤ t ≤ 40 325~445 (降伏比80%以下) | 490~610 | (B) ≥ 40 | — | 依規格 |
| | | | | | 17min[6 ≤ t ≤ 16] | | |
| ASTM A3 | A36M/A36 | 250 (36)min | | 400-550 (58-80) | 20min[標距(g.l)200mm] | — | — |
| ASTM A572 | Grade50 type 2 | 345 (50)min | | 450 (65)min | 18min[標距(g.l)200mm] | — | — |
| ASTM A709 | Grade65 type 2 | 450 (65)min | | 550 (80)min | 15min[標距(g.l)200mm] | — | — |
| EN 10025-2 | S235JR, S235J0, S235J2 | 235min | 225min | 360~510 | 26min (g.l=5.65√S0) | — | 依規格 |
| | S275JR, S275J0, S275J2 | 275min | 265min | 410~560 | 23min (g.l=5.65√S0) | | |
| | S355JR, S355J0, S355J2, S355K2 | 355min | 345min | 470~630 | 22min (g.l=5.65√S0) | | |
| AS/NZS 3679.1 | GR300 | t < 11 320min | 11 ≤ t ≤ 17 300min | 440min | 22min (g.l=5.65√S0) | — | — |
| | GR350L0 | t < 11 360min | 11 ≤ t ≤ 17 340min | 480min | 20min (g.l=5.65√S0) | — | 依規格 |



角鋼

— ANGLE

2.4 形狀及尺度許可差 (Shape and Tolerance on Dimension)

角鋼形狀及尺度容許差 (Shape and Tolerance on Dimension) CNS 1490 & JIS G3192

單位(Unit) : mm

| 項目 (Item) | 區分 (Sub-Item) | 許可差 (Tolerance) | 摘要 (Remark) |
|---------------|--------------------|--|---|
| 邊長 (A或B) | $B < 50$ | ± 1.5 | |
| | $50 \leq B < 100$ | ± 2.0 | |
| | $100 \leq B < 200$ | ± 3.0 | |
| | $200 \leq B$ | ± 4.0 | |
| 厚度 (t) | $B < 130$ | $t < 6.3$ | ± 0.6 |
| | | $6.3 \leq t < 10$ | ± 0.7 |
| | | $10 \leq t < 16$ | ± 0.8 |
| | | $16 \leq t$ | ± 1.0 |
| | $130 \leq B$ | $t < 6.3$ | ± 0.7 |
| | | $6.3 \leq t < 10$ | ± 0.8 |
| | | $10 \leq t < 16$ | ± 1.0 |
| | | $16 \leq t < 25$ | ± 1.2 |
| 長度 (L) | $L \leq 7M$ | $+40, 0$ | |
| | $7M < L$ | 每增加1米，容許差上限增加5mm (Add 5mm to plus side tolerance for every increase of 1m or its fraction) | |
| 直角度 (T) | 所有尺寸適用 (All Sizes) | $T \leq 2.5\% \times B$ | |
| 彎曲度 (Warpage) | 所有尺寸適用 (All Sizes) | $0.3\% \times L \text{ max}$ | 適用於上下，左右之彎曲 (To Be Applied To Warpage Upward And Downward, And To The Right And Left) |

2.5 標記及包裝 (Standard of Marking and Packing)

2.5.1 截面顏色標示 (Color Marking on One Side Section)

角鋼 Angle

| 厚度 (t) | | | | | | 端底 (Bottom) | 標記 (Mark) | |
|--------|-----|-----|------|----|------|-------------|------------|-----------|
| mm | | | inch | | | | | |
| 2.5 | 4.5 | 5.5 | 6.5 | | | 紅 (Red) | 白 (White) | |
| 3 | 2.7 | 7.3 | 8 | 13 | 1/8 | 5/16 | 黃 (Yellow) | 紅 (Red) |
| 4 | 3.7 | 8.2 | 9 | | 5/32 | | 藍 (Blue) | 白 (White) |
| 5 | 4.6 | | 10 | | 3/16 | 3/8 | 綠 (Green) | 白 (White) |
| 6 | 11 | | | | 1/4 | 1/2 | 白 (White) | 紅 (Red) |
| 7 | 12 | | | | | | 粉紅 (Pink) | 白 (White) |

2.5.2 包裝標準 (Standard of Package)

(1) 等邊角鋼 Equal Angle

| 尺寸 B x t (mm) | 單位重量 (kg/m) | 6m | | | 7m | | | 8m | | |
|---------------------|----------------|------------------|-------------------|------------------|------------------|-------------------|------------------|------------------|-------------------|------------------|
| | | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) |
| 25x 2.5 | 0.946 | 5.68 | 361 | 2050 | 6.62 | 306 | 2026 | 7.57 | 267 | 2021 |
| 25x 3 | 1.12 | 6.72 | 298 | 2003 | 7.84 | 259 | 2031 | 8.96 | 228 | 2043 |
| 30x 2.5 | 1.14 | 6.84 | 295 | 2018 | 7.98 | 247 | 1971 | 9.12 | 219 | 1997 |
| 30x 3 | 1.36 | 8.16 | 247 | 2016 | 9.52 | 219 | 2085 | 10.9 | 185 | 2016 |
| 30x 4 | 1.76 | 10.6 | 192 | 2035 | 12.3 | 171 | 2103 | 14.1 | 144 | 2030 |
| 38x 2.5 | 1.46 | 8.76 | 228 | 1997 | 10.2 | 204 | 2081 | 11.7 | 175 | 2048 |
| 38x 3 | 1.74 | 10.4 | 194 | 2018 | 12.2 | 170 | 2074 | 13.9 | 141 | 1960 |
| 38x 4 | 2.26 | 13.6 | 150 | 2040 | 15.8 | 131 | 2070 | 18.1 | 121 | 2190 |
| 38x 5 | 2.79 | 16.7 | 121 | 2021 | 19.5 | 106 | 2067 | 22.3 | 92 | 2052 |
| 40x 3 | 1.83 | 11.0 | 189 | 2079 | 12.8 | 160 | 2048 | 14.6 | 136 | 1986 |
| 40x 4 | 2.39 | 14.3 | 141 | 2016 | 16.7 | 121 | 2021 | 19.1 | 107 | 2044 |
| 40x 5 | 2.95 | 17.7 | 116 | 2053 | 20.6 | 96 | 1978 | 23.6 | 87 | 2053 |
| 45x 5 | 3.38 | 20.3 | 96 | 1949 | 23.7 | 88 | 2086 | 27.0 | 76 | 2052 |
| 50x 3 | 2.34 | 14.0 | 135 | 1890 | 16.4 | 123 | 2017 | 18.7 | 108 | 2020 |
| 50x 4 | 3.06 | 18.4 | 112 | 2061 | 21.4 | 96 | 2054 | 24.5 | 85 | 2082 |
| 50x 5 | 3.77 | 22.6 | 92 | 2079 | 26.4 | 76 | 2006 | 30.2 | 65 | 1963 |
| 50x 6 | 4.43 | 26.6 | 80 | 2128 | 31.0 | 65 | 2015 | 35.4 | 57 | 2018 |
| 50x 8 | 5.78 | 34.7 | 57 | 1978 | 40.5 | 50 | 2025 | 46.2 | 42 | 1940 |
| 60x 5 | 4.55 | 27.3 | 73 | 1993 | 31.8 | 65 | 2067 | 36.4 | 54 | 1966 |
| 60x 6 | 5.42 | 32.5 | 65 | 2112 | 37.9 | 54 | 2047 | 43.4 | 48 | 2083 |
| 65x 6 | 5.91 | 35.5 | 55 | 1952 | 41.4 | 50 | 2070 | 47.3 | 45 | 2128 |
| 65x 8 | 7.66 | 46.0 | 45 | 2070 | 53.6 | 40 | 2144 | 61.3 | 35 | 2146 |
| 70x 5 | 5.37 | 32.2 | 65 | 2093 | 37.6 | 55 | 2068 | 43.0 | 48 | 2064 |
| 70x 6 | 6.38 | 38.3 | 55 | 2106 | 44.7 | 45 | 2012 | 51.0 | 40 | 2040 |
| 75x 6 | 6.85 | 41.1 | 50 | 2055 | 48.0 | 45 | 2160 | 54.8 | 40 | 2192 |
| 75x 9 | 9.96 | 59.8 | 35 | 2093 | 69.7 | 30 | 2091 | 79.7 | 25 | 1992 |
| 75x 12 | 13.0 | 78.0 | 25 | 1950 | 91.0 | 23 | 2093 | 104 | 20 | 2080 |
| 90x 7 | 9.59 | 57.5 | 36 | 2070 | 67.1 | 30 | 2013 | 76.7 | 27 | 2071 |
| 90x 10 | 13.3 | 79.8 | 27 | 2155 | 93.1 | 21 | 1955 | 106 | 18 | 1908 |
| 90x 13 | 17.0 | 102 | 21 | 2142 | 119 | 18 | 2142 | 136 | 15 | 2040 |
| 100x 7 | 10.7 | 64.2 | 33 | 2119 | 74.9 | 27 | 2022 | 85.6 | 24 | 2054 |
| 100x 10 | 14.9 | 89.4 | 24 | 2146 | 104 | 18 | 1872 | 119 | 18 | 2142 |
| 100x 12 | 17.8 | 107 | 18 | 1926 | 125 | 18 | 2250 | 142 | 15 | 2130 |
| 100x 13 | 19.1 | 115 | 18 | 2070 | 134 | 15 | 2010 | 153 | 12 | 1836 |

(2) 輕型等邊角鋼 Light Gauge Equal Angle

| | | | | | | | | | | |
|---------|------|------|-----|------|------|-----|------|------|-----|------|
| 25x 2.7 | 1.03 | 6.18 | 330 | 2039 | 7.21 | 283 | 2040 | 8.24 | 251 | 2068 |
| 30x 2.7 | 1.25 | 7.50 | 274 | 2055 | 8.75 | 233 | 2039 | 10.0 | 199 | 1990 |
| 30x 3.7 | 1.62 | 9.72 | 212 | 2061 | 11.3 | 178 | 2011 | 13.0 | 157 | 2041 |
| 38x 2.7 | 1.60 | 9.60 | 209 | 2006 | 11.2 | 189 | 2117 | 12.8 | 160 | 2048 |
| 38x 3.7 | 2.08 | 12.5 | 160 | 2000 | 14.6 | 141 | 2059 | 16.6 | 121 | 2009 |
| 38x 4.6 | 2.57 | 15.4 | 130 | 2002 | 18.0 | 111 | 1998 | 20.6 | 101 | 2081 |
| 40x 2.7 | 1.68 | 10.1 | 204 | 2060 | 11.8 | 170 | 2006 | 13.4 | 150 | 2010 |
| 40x 3.7 | 2.20 | 13.2 | 155 | 2046 | 15.4 | 131 | 2017 | 17.6 | 116 | 2042 |
| 40x 4.6 | 2.72 | 16.3 | 125 | 2038 | 19.0 | 106 | 2014 | 21.8 | 92 | 2006 |
| 50x 3.7 | 2.82 | 16.9 | 119 | 2011 | 19.7 | 104 | 2049 | 22.6 | 88 | 1989 |
| 50x 4.6 | 3.47 | 20.8 | 96 | 1997 | 24.3 | 84 | 2041 | 27.8 | 73 | 2029 |
| 50x 5.5 | 4.08 | 24.5 | 84 | 2058 | 28.6 | 69 | 1973 | 32.6 | 61 | 1989 |
| 65x 5.5 | 5.43 | 32.6 | 60 | 1956 | 38.0 | 55 | 2090 | 43.4 | 45 | 1953 |
| 75x 5.5 | 6.30 | 37.8 | 55 | 2079 | 44.1 | 45 | 1984 | 50.4 | 40 | 2016 |





◆等邊角鋼，續 (Package of Equal Angle, Cont.)

| 尺寸 BxI (mm) | 單位重量 (kg/m) | 9m | | | 10m | | | 12m | | |
|----------------|----------------|------------------|-------------------|------------------|------------------|-------------------|------------------|------------------|-------------------|------------------|
| | | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) |
| 25x 2.5 | 0.946 | 8.51 | 251 | 2136 | 9.46 | 220 | 2081 | 11.4 | 173 | 1972 |
| 25x 3 | 1.12 | 10.1 | 196 | 1980 | 11.2 | 173 | 1938 | 13.4 | 149 | 1997 |
| 30x 2.5 | 1.14 | 10.3 | 199 | 2050 | 11.4 | 178 | 2029 | 13.7 | 151 | 2069 |
| 30x 3 | 1.36 | 12.2 | 171 | 2086 | 13.6 | 151 | 2054 | 16.3 | 123 | 2005 |
| 30x 4 | 1.76 | 15.8 | 130 | 2054 | 17.6 | 123 | 2165 | 21.1 | 96 | 2026 |
| 38x 2.5 | 1.46 | 13.1 | 155 | 2030 | 14.6 | 141 | 2059 | 17.5 | 121 | 2118 |
| 38x 3 | 1.74 | 15.7 | 131 | 2057 | 17.4 | 121 | 2105 | 20.9 | 97 | 2027 |
| 38x 4 | 2.26 | 20.3 | 102 | 2071 | 22.6 | 87 | 1966 | 27.1 | 77 | 2087 |
| 38x 5 | 2.79 | 25.1 | 82 | 2058 | 27.9 | 72 | 2009 | 33.5 | 63 | 2110 |
| 40x 3 | 1.83 | 16.5 | 121 | 1996 | 18.3 | 107 | 1958 | 22.0 | 92 | 2024 |
| 40x 4 | 2.39 | 21.5 | 92 | 1978 | 23.9 | 82 | 1960 | 28.7 | 73 | 2095 |
| 40x 5 | 2.95 | 26.6 | 77 | 2048 | 29.5 | 67 | 1976 | 35.4 | 58 | 2053 |
| 45x 5 | 3.38 | 30.4 | 69 | 2098 | 33.8 | 61 | 2062 | 40.6 | 50 | 2030 |
| 50x 3 | 2.34 | 21.1 | 96 | 2026 | 23.4 | 85 | 1989 | 28.1 | 73 | 2051 |
| 50x 4 | 3.06 | 27.5 | 73 | 2008 | 30.6 | 65 | 1989 | 36.7 | 54 | 1982 |
| 50x 5 | 3.77 | 33.9 | 61 | 2068 | 37.7 | 53 | 1998 | 45.2 | 46 | 2079 |
| 50x 6 | 4.43 | 39.9 | 50 | 1995 | 44.3 | 50 | 2215 | 53.2 | 38 | 2022 |
| 50x 8 | 5.78 | 52.0 | 38 | 1976 | 57.8 | 34 | 1965 | 69.4 | 30 | 2082 |
| 60x 5 | 4.55 | 41.0 | 50 | 2050 | 45.5 | 45 | 2048 | 54.6 | 38 | 2075 |
| 60x 6 | 5.42 | 48.8 | 43 | 2098 | 54.2 | 38 | 2060 | 65.0 | 30 | 1950 |
| 65x 6 | 5.91 | 53.2 | 40 | 2128 | 59.1 | 35 | 2068 | 70.9 | 30 | 2127 |
| 65x 8 | 7.66 | 68.9 | 30 | 2067 | 76.6 | 25 | 1915 | 91.9 | 20 | 1838 |
| 70x 5 | 5.37 | 48.3 | 43 | 2077 | 53.7 | 38 | 2041 | 64.4 | 33 | 2125 |
| 70x 6 | 6.38 | 57.4 | 35 | 2009 | 63.8 | 33 | 2105 | 76.6 | 28 | 2145 |
| 75x 6 | 6.85 | 61.6 | 35 | 2156 | 68.5 | 30 | 2055 | 82.2 | 25 | 2055 |
| 75x 9 | 9.96 | 89.6 | 23 | 2061 | 99.6 | 20 | 1992 | 120 | 18 | 2160 |
| 75x 12 | 13.0 | 117 | 18 | 2106 | 130 | 15 | 1950 | 156 | 13 | 2028 |
| 90x 7 | 9.59 | 86.3 | 24 | 2071 | 95.9 | 21 | 2014 | 115 | 18 | 2070 |
| 90x 10 | 13.3 | 120 | 18 | 2160 | 133 | 15 | 1995 | 160 | 12 | 1920 |
| 90x 13 | 17.0 | 153 | 12 | 1836 | 170 | 12 | 2040 | 204 | 9 | 1836 |
| 100x 7 | 10.7 | 96.3 | 21 | 2022 | 107 | 18 | 1926 | 128 | 15 | 1920 |
| 100x 10 | 14.9 | 134 | 15 | 2010 | 149 | 14 | 2086 | 179 | 12 | 2148 |
| 100x 12 | 17.8 | 160 | 12 | 1920 | 178 | 12 | 2136 | 214 | 9 | 1926 |
| 100x 13 | 19.1 | 172 | 12 | 2064 | 191 | 11 | 2101 | 229 | 9 | 2061 |



◆輕型等邊角鋼，續 (Package of Light Gauge Equal Angle, Cont.)

| | | | | | | | | | | |
|---------|------|------|-----|------|------|-----|------|------|-----|------|
| 25x 2.7 | 1.03 | 9.27 | 220 | 2039 | 10.3 | 196 | 2019 | 12.4 | 165 | 2046 |
| 30x 2.7 | 1.25 | 11.2 | 178 | 1994 | 12.5 | 171 | 2138 | 15.0 | 137 | 2055 |
| 30x 3.7 | 1.62 | 14.6 | 137 | 2000 | 16.2 | 123 | 1993 | 19.4 | 103 | 1998 |
| 38x 2.7 | 1.60 | 14.4 | 141 | 2030 | 16.0 | 126 | 2016 | 19.2 | 107 | 2054 |
| 38x 3.7 | 2.08 | 18.7 | 107 | 2001 | 20.8 | 97 | 2018 | 25.0 | 82 | 2050 |
| 38x 4.6 | 2.57 | 23.1 | 87 | 2010 | 25.7 | 77 | 1979 | 30.8 | 67 | 2064 |
| 40x 2.7 | 1.68 | 15.1 | 136 | 2054 | 16.8 | 121 | 2033 | 20.2 | 102 | 2060 |
| 40x 3.7 | 2.20 | 19.8 | 102 | 2020 | 22.0 | 92 | 2024 | 26.4 | 77 | 2033 |
| 40x 4.6 | 2.72 | 24.5 | 82 | 2009 | 27.2 | 77 | 2094 | 32.6 | 63 | 2054 |
| 50x 3.7 | 2.82 | 25.4 | 81 | 2057 | 28.2 | 73 | 2059 | 33.8 | 58 | 1960 |
| 50x 4.6 | 3.47 | 31.2 | 65 | 2028 | 34.7 | 57 | 1978 | 41.6 | 50 | 2080 |
| 50x 5.5 | 4.08 | 36.7 | 57 | 2092 | 40.8 | 50 | 2040 | 49.0 | 42 | 2058 |
| 65x 5.5 | 5.43 | 48.9 | 40 | 1956 | 54.3 | 35 | 1900 | 65.2 | 30 | 1956 |
| 75x 5.5 | 6.30 | 56.7 | 35 | 1984 | 63 | 30 | 1890 | 75.6 | 25 | 1890 |

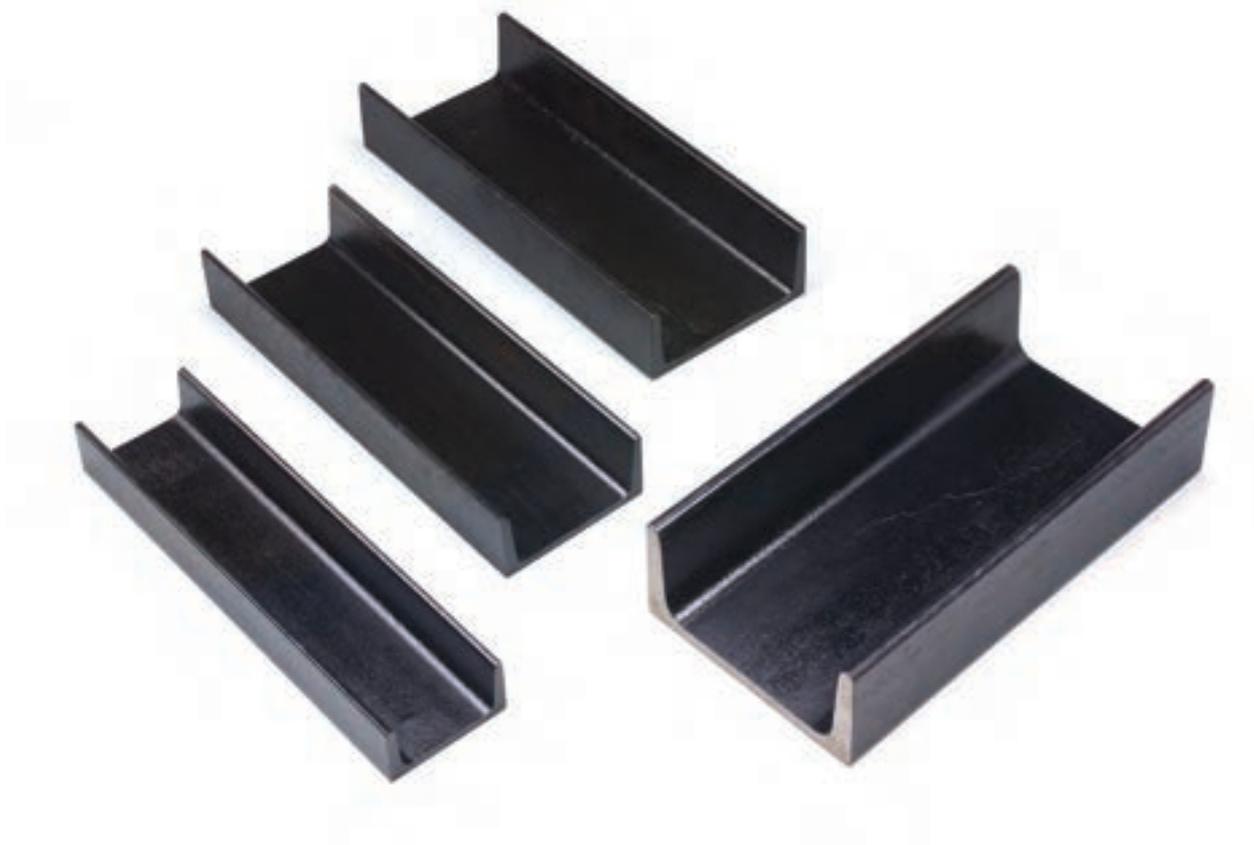
◆不等邊角鋼(Package of unequal Angle,Cont.)

| 尺寸 AXBxt (mm) | 單位重量 (kg/m) | 6m | | | 7m | | | 8m | | |
|------------------|----------------|------------------|-------------------|------------------|------------------|-------------------|------------------|------------------|-------------------|------------------|
| | | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) |
| 100x75x7 | 9.32 | 55.9 | 30 | 1677 | 65.2 | 30 | 1956 | 74.6 | 27 | 2014 |
| 100x75x10 | 13.0 | 78 | 21 | 1638 | 91 | 21 | 1911 | 104 | 20 | 2080 |

| 尺寸 AXBxt (mm) | 單位重量 (kg/m) | 9m | | | 10m | | | 12m | | |
|------------------|----------------|------------------|-------------------|------------------|------------------|-------------------|------------------|------------------|-------------------|------------------|
| | | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) | 單支重量 (kg/pcs) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) |
| 100x75x7 | 9.32 | 83.9 | 24 | 2014 | 93.2 | 22 | 2050 | 112 | 18 | 2016 |
| 100x75x10 | 13.0 | 117 | 17 | 1989 | 130 | 16 | 2080 | 156 | 14 | 2184 |



【三、槽鋼 CHANNEL】



3.1 可產製尺寸 (Available Sizes)

| 槽鋼 (Channel) |
|---------------------|
| 高度 (H) : 75mm~150mm |
| 邊長 (B) : 40mm~75mm |
| 長度 (L) : 5.3m~13m |

3.2 可產製鋼種 (Available Grade)

同2.2 (The Same As 2.2 P6)

3.3 化學成份及機械性質 (Chemical and Mechanical Requirements)

同2.3 (The Same As 2.3 P7)



3.4 形狀及尺度許可差 (Shape and Tolerance on Dimension)

槽鋼形狀及尺度容許差 (Shape and Tolerance on Dimension) CNS 1490 & JIS G3192

單位(Unit): mm

| 項目 (Item) | 區分 (Sub-Item) | 許可差 (Tolerance) | 摘要 (Remark) | |
|-------------------|--------------------|--|---|-----------|
| 邊長 (B) | $B < 50$ | ± 1.5 | | |
| | $50 \leq B < 100$ | ± 2.0 | | |
| | $100 \leq B < 200$ | ± 3.0 | | |
| | $200 \leq B$ | ± 4.0 | | |
| 高度 (H) | $H < 100$ | ± 1.5 | | |
| | $100 \leq H < 200$ | ± 2.0 | | |
| | $200 \leq H < 400$ | ± 3.0 | | |
| | $400 \leq H$ | ± 4.0 | | |
| 厚度 (t_1, t_2) | $H < 130$ | $t < 6.3$ | | ± 0.6 |
| | | $6.3 \leq t < 10$ | | ± 0.7 |
| | | $10 \leq t < 16$ | ± 0.8 | |
| | | $16 \leq t$ | ± 1.0 | |
| | $130 \leq H$ | $t < 6.3$ | ± 0.7 | |
| | | $6.3 \leq t < 10$ | ± 0.8 | |
| | | $10 \leq t < 16$ | ± 1.0 | |
| | | $16 \leq t < 25$ | ± 1.2 | |
| | | $25 \leq t$ | ± 1.5 | |
| | | | | |
| 長度 (L) | $L \leq 7m$ | $+40, 0$ | | |
| | $7m < L$ | 每增加1米，容許差上限增加5mm (Add 5mm to plus side tolerance for every increase of 1m or its fraction) | | |
| 直角度 (T) | 所有尺寸適用 (All Sizes) | $T \leq 2.5\% \times B$ | | |
| 彎曲度 (Warpage) | 所有尺寸適用 (All Sizes) | $0.3\% \times L, \text{ max}$ | 適用於上下，左右之彎曲 (To Be Applied To Warpage Upward And Downward, And To The Right And Left) | |



3.5 標記及包裝 (Standard of Marking and Packing)

3.5.1 截面顏色標示 (Color Marking on One Side Section)

槽鋼 Channel

| 尺寸 (Size), mm | 端面顏色 (Color) |
|---|--------------|
| 150x 75x 6.5x 10, 100 PFC | 紅 (Red) |
| 75x 40x 4.1x 5.5 | 黃 (Yellow) |
| 150x 75x 9x 12.5 | 藍 (Blue) |
| 75x 40x 5x 7 | 綠 (Green) |
| 100x 50x 5x 7.5 | |
| 125x 65x 6x 8, 150 PFC, 102x 51x 6.1x 7.6 | 白 (White) |
| 100x 50x 4.1x 6, 76x 38x 5.1x 6.8 | 粉紅 (Pink) |

3.5.2 包裝標準 (Standard of Package)

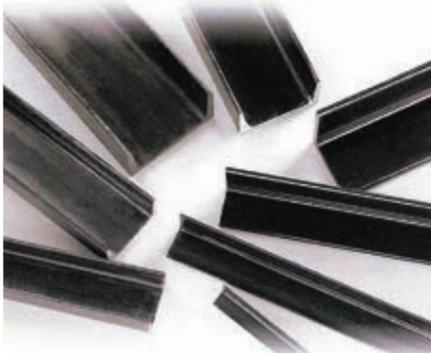
(1) 槽鋼 Channel

| 尺寸 Hx Bx t1x t2(mm) | 單位重量 (kg/m) | 長度 (m) | 單支重量 (kg/pcs) | 包裝方式 (package) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) |
|------------------------|----------------|-----------|------------------|-------------------|-------------------|------------------|
| 75x 40x 5x 7 | 6.92 | 6 | 41.5 | (4X2)X6 | 48 | 1992 |
| | | 7 | 48.4 | (4X2)X5 | 40 | 1936 |
| | | 8 | 55.4 | (4X2)X5 | 40 | 2216 |
| | | 9 | 62.3 | (4X2)X4 | 32 | 1994 |
| | | 10 | 69.2 | (4X2)X4 | 32 | 2214 |
| | | 11 | 76.1 | (4X2)X3 | 24 | 1826 |
| | | 12 | 83.0 | (4X2)X3 | 24 | 1992 |
| 100x 50x 5x 7.5 | 9.36 | 6 | 56.2 | (3X2)X5 | 30 | 1686 |
| | | 7 | 65.5 | (3X2)X5 | 30 | 1965 |
| | | 8 | 74.9 | (3X2)X5 | 30 | 2247 |
| | | 9 | 84.2 | (3X2)X4 | 24 | 2021 |
| | | 10 | 93.6 | (3X2)X4 | 24 | 2246 |
| | | 11 | 103 | (3X2)X4 | 24 | 2472 |
| 125x 65x 6x 8 | 13.4 | 6 | 80.4 | (2X2)X4 | 16 | 1286 |
| | | 7 | 93.8 | (2X2)X4 | 16 | 1501 |
| | | 8 | 107 | (2X2)X4 | 16 | 1712 |
| | | 9 | 121 | (2X2)X4 | 16 | 1936 |
| | | 10 | 134 | (2X2)X4 | 16 | 2144 |
| | | 11 | 147 | (2X2)X4 | 16 | 2352 |
| 150x 75x 6.5x 10 | 18.6 | 6 | 112 | (2X2)X3 | 12 | 1344 |
| | | 7 | 130 | (2X2)X3 | 12 | 1560 |
| | | 8 | 149 | (2X2)X3 | 12 | 1788 |
| | | 9 | 167 | (2X2)X3 | 12 | 2004 |
| | | 10 | 186 | (2X2)X3 | 12 | 2232 |
| | | 11 | 205 | (2X2)X3 | 12 | 2460 |
| 150x 75x 9x 12.5 | 24 | 6 | 144 | (2X2)X3 | 12 | 1728 |
| | | 7 | 168 | (2X2)X3 | 12 | 2016 |
| | | 8 | 192 | (2X2)X3 | 12 | 2304 |
| | | 9 | 216 | (2X2)X2 | 8 | 1728 |
| | | 10 | 240 | (2X2)X2 | 8 | 1920 |
| | | 11 | 264 | (2X2)X2 | 8 | 2112 |
| | | 12 | 288 | (2X2)X2 | 8 | 2304 |

| | | | | | | |
|-----------------------------|------|----|------|---------|----|------|
| 100 PFC (100x50x4.2x6.7) | 8.31 | 6 | 49.9 | (3x2)x5 | 30 | 1497 |
| | | 7 | 58.2 | (3x2)x5 | 30 | 1746 |
| | | 8 | 66.5 | (3x2)x5 | 30 | 1995 |
| | | 9 | 74.8 | (3x2)x4 | 24 | 1795 |
| | | 10 | 83.1 | (3x2)x4 | 24 | 1994 |
| | | 11 | 91.4 | (3x2)x4 | 24 | 2194 |
| | | 12 | 99.7 | (3x2)x3 | 18 | 1795 |
| 150 PFC (150x75x6x9.5) | 17.7 | 6 | 106 | (2x2)x3 | 12 | 1272 |
| | | 7 | 124 | (2x2)x3 | 12 | 1488 |
| | | 8 | 142 | (2x2)x3 | 12 | 1704 |
| | | 9 | 159 | (2x2)x3 | 12 | 1908 |
| | | 10 | 177 | (2x2)x3 | 12 | 2124 |
| | | 11 | 195 | (2x2)x3 | 12 | 2340 |
| | | 12 | 212 | (2x2)x2 | 8 | 1696 |

(2)輕型槽鋼 Light Gauge Channel

| 尺寸 Hx Bx t1x t2(mm) | 單位重量 (kg/m) | 長度(m) | 單支重量 (kg/pcs) | 包裝方式 (package) | 包裝支數 (pcs/bdl) | 包裝重量 (kg/bdl) |
|------------------------|----------------|-------|------------------|-------------------|-------------------|------------------|
| 75x40x4.1x5.5 | 5.76 | 6 | 34.6 | (4x2)x6 | 48 | 1661 |
| | | 7 | 40.3 | (4x2)x6 | 48 | 1934 |
| | | 8 | 46.1 | (4x2)x5 | 40 | 1844 |
| | | 9 | 51.8 | (4x2)x5 | 40 | 2072 |
| | | 10 | 57.6 | (4x2)x4 | 32 | 1843 |
| | | 11 | 63.4 | (4x2)x4 | 32 | 2029 |
| | | 12 | 69.1 | (4x2)x4 | 32 | 2211 |
| 76x38x5.1x6.8 | 6.70 | 6 | 40.2 | (4x2)x6 | 48 | 1930 |
| | | 7 | 46.9 | (4x2)x6 | 48 | 2251 |
| | | 8 | 53.6 | (4x2)x5 | 40 | 2144 |
| | | 9 | 60.3 | (4x2)x4 | 32 | 1930 |
| | | 10 | 67.0 | (4x2)x4 | 32 | 2144 |
| | | 11 | 73.7 | (4x2)x3 | 24 | 1769 |
| | | 12 | 80.4 | (4x2)x3 | 24 | 1930 |
| 100x50x4.1x6 | 7.77 | 6 | 46.6 | (3x2)x5 | 30 | 1398 |
| | | 7 | 54.4 | (3x2)x5 | 30 | 1632 |
| | | 8 | 62.2 | (3x2)x5 | 30 | 1866 |
| | | 9 | 69.9 | (3x2)x5 | 30 | 2097 |
| | | 10 | 77.7 | (3x2)x4 | 24 | 1865 |
| | | 11 | 85.5 | (3x2)x4 | 24 | 2052 |
| | | 12 | 93.2 | (3x2)x4 | 24 | 2237 |
| 102x51x6.1x7.6 | 10.4 | 6 | 62.4 | (3x2)x5 | 30 | 1872 |
| | | 7 | 72.8 | (3x2)x5 | 30 | 2184 |
| | | 8 | 83.2 | (3x2)x4 | 24 | 1997 |
| | | 9 | 93.6 | (3x2)x4 | 24 | 2246 |
| | | 10 | 104 | (3x2)x3 | 18 | 1872 |
| | | 11 | 114 | (3x2)x3 | 18 | 2052 |
| | | 12 | 125 | (3x2)x3 | 18 | 2250 |





【四、扁鋼 FLAT】



4.1 可產製尺寸 (Available Size)

寬度 (b) : 12mm~205mm

厚度 (t) : 3mm~28mm

長度 (L) : 4m~13m

4.2 可產製鋼種 (Available Grade)

| 分類 (Division) | 規格 (Spec.) | 材質記號 (Symbol) |
|--------------------------------------|-----------------|--------------------------------|
| 一般結構用 (General Structure) | CNS 2473 | SS330, SS400, SS490, SS540 |
| | JIS G3101 | |
| | ASTM A36 | A36M/A36 |
| | AS/NZS 3679.1 | GR300, GR350L0 |
| 銲接/建築結構用 (Welded/Buliding Structure) | CNS 2947 | SM400A, SM490A |
| | JIS G3106 | |
| | CNS 13812 | SN400B, SN490B |
| | JIS G3136 | |
| | ASTM A572 | |
| ASTM A709 | Grade 50 type 2 | |
| 結構用 (Structure) | EN 10025-2 | S235JR, S235J0, S235J2 |
| | | S275JR, S275J0, S275J2 |
| | | S355JR, S355J0, S355J2, S355K2 |
| 機械構造用碳鋼 (Machine Structure) | JIS G4051 | S45C, S50C |



4.3 化學成份及機械性質 (Chemical and Mechanical Requirements)

4.3.1 化學成份 (Chemical Requirements)

| 規格 (Spec.) | 種類符號 (Symbol) | 化學成份 (Composition) % | | | | | |
|---------------|-------------------------|----------------------|-----------|----------|----------|-----------|-----------|
| | | C | Mn | P | S | Si | B |
| CNS 2473 | SS330 SS400 SS490 | - | - | 0.050max | 0.050max | - | 0.0007max |
| | SS540 | 0.30max | 1.60max | 0.040max | 0.040max | - | 0.0007max |
| CNS 2947 | SM400A | 0.23max | 2.5*Cmin | 0.035max | 0.035max | - | 0.0007max |
| | SM490A | 0.20max | 1.65max | 0.035max | 0.035max | 0.55max | 0.0007max |
| CNS 13812 | SN400B | 0.20max | 0.60~1.50 | 0.030max | 0.015max | 0.35max | 0.0007max |
| | SN490B | 0.18max | 1.65max | 0.030max | 0.015max | 0.55max | 0.0007max |
| JIS G3101 | SS330 SS400 SS490 | - | - | 0.050max | 0.050max | - | - |
| | SS540 | 0.30max | 1.60max | 0.040max | 0.040max | - | - |
| JIS G3106 | SM400A | 0.23max | 2.5*Cmin | 0.035max | 0.035max | - | - |
| | SM490A | 0.20max | 1.65max | 0.035max | 0.035max | 0.55max | - |
| JIS G3136 | SN400B | 0.20max | 0.60~1.50 | 0.030max | 0.015max | 0.35max | - |
| | SN490B | 0.18max | 1.65max | 0.030max | 0.015max | 0.55max | - |
| JIS G4051 | S45C | 0.42~0.48 | 0.60~0.90 | 0.030max | 0.035max | 0.15~0.35 | - |
| | S50C | 0.47~0.53 | 0.60~0.90 | 0.030max | 0.035max | 0.15~0.35 | - |
| ASTM A36 | A36M (t ≤ 20) | 0.26max | - | 0.040max | 0.050max | 0.40max | - |
| | A36 (20 < t ≤ 40) | 0.27max | 0.60~0.90 | 0.040max | 0.050max | 0.40max | - |
| ASTM A572 | Grade 50 type 2 | 0.23max | 1.35max | 0.040max | 0.050max | 0.40max | - |
| | Grade 65 type 2 | 0.26max | 1.35max | 0.040max | 0.050max | 0.40max | - |
| ASTM A709 | Grade 50 type 2 | 0.23max | 1.35max | 0.040max | 0.050max | 0.40max | - |
| AS/NZS 3679.1 | GR300 | 0.25max | 1.60max | 0.040max | 0.040max | 0.50max | - |
| | GR350L0 | 0.22max | 1.60max | 0.040max | 0.040max | 0.50max | - |
| EN 10025-2 | S235JR | 0.17max | 1.40max | 0.035max | 0.035max | - | - |
| | S235J0 | 0.17max | 1.40max | 0.030max | 0.030max | - | - |
| | S235J2 | 0.17max | 1.40max | 0.025max | 0.025max | - | - |
| | S275JR | 0.21max | 1.50max | 0.035max | 0.035max | - | - |
| | S275J0 | 0.18max | 1.50max | 0.030max | 0.030max | - | - |
| | S275J2 | 0.18max | 1.50max | 0.025max | 0.025max | - | - |
| | S355JR | 0.24max | 1.60max | 0.035max | 0.035max | 0.55max | - |
| | S355J0 | 0.20max | 1.60max | 0.030max | 0.030max | 0.55max | - |
| | S355J2, S355K2 | 0.20max | 1.60max | 0.025max | 0.025max | 0.55max | - |

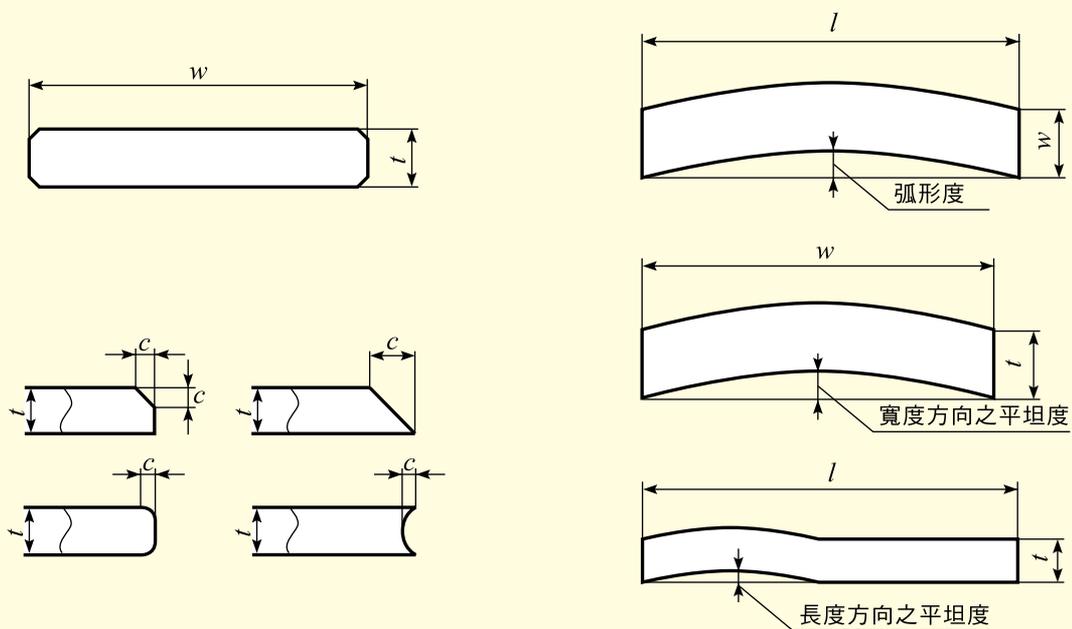
4.3.2 機械性質 (Mechanical Requirements) 同2.3.2 (The Same As 2.3.2)



4.4 形狀及尺度許可差 (Shape and Tolerance on Dimension) CNS 8278 & JIS G3194(2015)

| 尺度 | 等級 | 尺度範圍 mm 許可差 mm | | | | | | |
|----------|----|------------------------------------|------------|-------------|-------------|---------------------|-------------|--------------|
| | | < 6 | 6 ≤ t < 12 | 12 ≤ t < 15 | 15 ≤ t < 20 | 20 ≤ t < 25 | 25 ≤ t < 40 | 40 ≤ t < 100 |
| 厚度 t | A | ± 0.5 | ± 0.5 | ± 0.5 | ± 0.6 | ± 1.0 | ± 1.0 | ± 1.5 |
| | B | ± 0.3 | ± 0.4 | ± 0.5 | ± 0.6 | ± 0.8 | ± 1.0 | ± 1.2 |
| | C | ± 0.3 | +0.5~-0.3 | +1.1~-0.3 | +1.1~-0.3 | +1.1~-0.3 | +1.4~-0.3 | +2.1~-0.3 |
| 寬度 w | | w < 50 | | | | w ≥ 50 | | |
| | A | ± 0.8 | | | | ± 2.0%，但最大值為 ± 10.0 | | |
| | B | ± 0.8 | | | | ± 1.6%，但最大值為 ± 3.5 | | |
| 長度 l | A | +200~0 | | | | | | |
| | B | +100~0 | | | | | | |
| | C | +50~0 | | | | | | |
| | D | +25~0 | | | | | | |
| 切角 c | | t < 9 | | | | t ≥ 9 | | |
| | B | 依買賣雙方之協議 | | | | 厚度之15%以下，但最大值為4mm | | |
| 弧形度 | A | 全長的0.4%以下，但任意之每1m長度為4mm以下 | | | | | | |
| | B | 全長的0.3%以下，但任意之每1m長度為4mm以下 | | | | | | |
| | C | 全長的0.25%以下，但任意之每1m長度為2.5mm以下 | | | | | | |
| 寬度方向之平坦度 | B | 寬度的0.3%以下 (w > 150 & t ≤ 50適用) | | | | | | |
| 長度方向之平坦度 | A | 全長的0.7%以下，最大值為20mm。但任意之每1m長度為7mm以下 | | | | | | |
| | B | 全長的0.3%以下，最大值為10mm。但任意之每1m長度為3mm以下 | | | | | | |
| 扭曲 | | 依買賣雙方之協議 | | | | | | |

圖示





4.5 標記及包裝 (Standard of Marking and Packing)

4.5.1 截面顏色標示 (Color Marking on One Side Section)

| 厚度(t), mm | | | | | 端底(Bottom) | 標記(Mark) |
|-----------|-----|-----|------|-------|------------|----------|
| 4.5 | 5.5 | 6.5 | xy.5 | | 紅(Red) | 白(White) |
| 3 | 8 | 13 | 18 | 23/28 | 黃(Yellow) | 紅(Red) |
| 4 | 9 | 14 | 19 | 24 | 藍(Blue) | 白(White) |
| 5 | 10 | 15 | 20 | 25 | 綠(Green) | 白(White) |
| 6 | 11 | 16 | 21 | | 白(White) | 紅(Red) |
| 7 | 12 | 17 | 22 | | 粉紅(Pink) | 白(White) |

4.5.2 六米包裝標準 (Package of 6m Flat)

| 尺寸W× t(mm) | 單位重量(kg/m) | 單支重量(kg/pcs) | 包裝方式(package) | 包裝支數(pcs/bdl) | 包裝重量(kg/bdl) |
|------------|------------|--------------|---------------|---------------|--------------|
| 12X6 | 0.565 | 3.39 | (16) 2 X16 | 512 | 1736 |
| 13X5 | 0.510 | 3.06 | (24) 2 X12 | 576 | 1763 |
| 15X3 | 0.353 | 2.12 | (24) 3 X12 | 864 | 1832 |
| 15X4 | 0.471 | 2.83 | (18) 3 X12 | 648 | 1834 |
| 16X3 | 0.377 | 2.26 | (24) 3 X11 | 792 | 1790 |
| 16X4 | 0.502 | 3.01 | (18) 3 X11 | 594 | 1788 |
| 16X4.5 | 0.565 | 3.39 | (18) 3 X10 | 540 | 1831 |
| 16X6 | 0.754 | 4.52 | (18) 2 X11 | 396 | 1790 |
| 16X8 | 1.00 | 6.00 | (18) 2 X8 | 288 | 1728 |
| 19X3 | 0.447 | 2.68 | (24) 3 X9 | 648 | 1737 |
| 19X3.5 | 0.522 | 3.13 | (24) 3 X8 | 576 | 1803 |
| 19X4 | 0.597 | 3.58 | (24) 2 X11 | 528 | 1890 |
| 19X4.5 | 0.671 | 4.03 | (28) 2 X8 | 448 | 1805 |
| 19X5 | 0.746 | 4.48 | (24) 2 X8 | 384 | 1720 |
| 19X6 | 0.895 | 5.37 | (20) 2 X8 | 320 | 1718 |
| 19X9 | 1.34 | 8.04 | (16) 2 X7 | 224 | 1801 |
| 20X3 | 0.471 | 2.83 | (24) 3 X9 | 648 | 1834 |
| 20X5 | 0.785 | 4.71 | (24) 2 X8 | 384 | 1809 |
| 20X6 | 0.942 | 5.65 | (16) 2 X9 | 288 | 1627 |
| 25X3 | 0.589 | 3.53 | (21) 4 X6 | 504 | 1779 |
| 25X3.5 | 0.687 | 4.12 | (20) 3 X7 | 420 | 1730 |
| 25X4 | 0.785 | 4.71 | (20) 3 X6 | 360 | 1696 |
| 25X4.5 | 0.883 | 5.30 | (20) 3 X6 | 360 | 1908 |
| 25X5 | 0.981 | 5.89 | (20) 3 X5 | 300 | 1767 |
| 25X6 | 1.18 | 7.08 | (16) 2 X7 | 224 | 1586 |
| 25X9 | 1.77 | 10.6 | (10) 3 X6 | 180 | 1908 |
| 25X12 | 2.36 | 14.2 | 10 X14 | 140 | 1988 |
| 30X4 | 0.942 | 5.65 | (22) 3 X5 | 330 | 1864 |
| 32X3 | 0.754 | 4.52 | (22) 4 X4 | 352 | 1591 |
| 32X3.5 | 0.879 | 5.27 | (22) 3 X5 | 330 | 1739 |
| 32X4 | 1.00 | 6.00 | (22) 3 X4 | 264 | 1584 |
| 32X4.5 | 1.13 | 6.78 | (22) 2 X6 | 264 | 1790 |
| 32X5 | 1.26 | 7.56 | (22) 2 X5 | 220 | 1663 |
| 32X6 | 1.51 | 9.06 | (16) 2 X6 | 192 | 1740 |
| 32X9 | 2.26 | 13.6 | 8×19 | 152 | 2067 |
| 38X3 | 0.895 | 5.37 | (16) 4 X5 | 320 | 1718 |
| 38X3.5 | 1.04 | 6.24 | (16) 4 X4 | 256 | 1597 |
| 38X4.5 | 1.34 | 8.04 | (16) 3 X5 | 240 | 1930 |
| 38×6 | 1.79 | 10.7 | 7×27 | 189 | 2022 |
| 38×9 | 2.68 | 16.1 | 7×18 | 126 | 2029 |
| 38×12 | 3.58 | 21.5 | 7×13 | 91 | 1956 |
| 38×16 | 4.77 | 28.6 | 7×10 | 70 | 2002 |
| 38×19 | 5.67 | 34 | 7×8 | 56 | 1904 |
| 50×4.5 | 1.77 | 10.6 | 5×38 | 190 | 2014 |



扁鋼 — FLAT

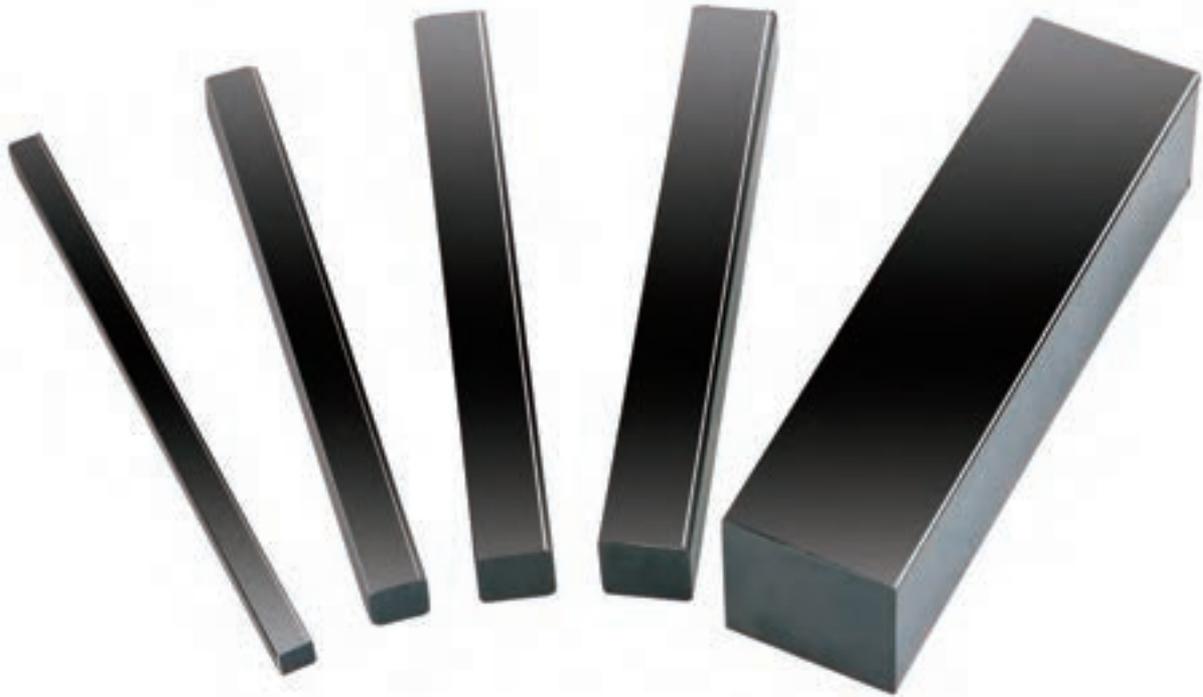
| 尺寸W× t(mm) | 單位重量(kg/m) | 單支重量(kg/pcs) | 包裝方式(package) | 包裝支數(pcs/bdl) | 包裝重量(kg/bdl) |
|------------|------------|--------------|---------------|---------------|--------------|
| 50× 5 | 1.96 | 11.8 | 5× 35 | 175 | 2065 |
| 50× 6 | 2.36 | 14.2 | 5× 29 | 145 | 2059 |
| 50× 8 | 3.14 | 18.8 | 5× 22 | 110 | 2068 |
| 50× 9 | 3.53 | 21.2 | 5× 19 | 95 | 2014 |
| 50× 10 | 3.92 | 23.5 | 5× 17 | 85 | 1998 |
| 50× 12 | 4.71 | 28.3 | 5× 14 | 70 | 1981 |
| 50× 16 | 6.28 | 37.7 | 5× 11 | 55 | 2074 |
| 50× 19 | 7.46 | 44.8 | 5× 9 | 45 | 2016 |
| 50× 22 | 8.64 | 51.8 | 5× 8 | 40 | 2072 |
| 50× 25 | 9.81 | 58.9 | 5× 7 | 35 | 2062 |
| 65× 4.5 | 2.30 | 13.8 | 4× 38 | 152 | 2098 |
| 65× 5 | 2.55 | 15.3 | 4× 33 | 132 | 2020 |
| 65× 6 | 3.06 | 18.4 | 4× 28 | 112 | 2061 |
| 65× 8 | 4.08 | 24.5 | 4× 21 | 84 | 2058 |
| 65× 9 | 4.59 | 27.5 | 4× 19 | 76 | 2090 |
| 65× 10 | 5.10 | 30.6 | 4× 17 | 68 | 2081 |
| 65× 12 | 6.12 | 36.7 | 4× 14 | 56 | 2055 |
| 65× 16 | 8.16 | 49.0 | 4× 10 | 40 | 1960 |
| 65× 19 | 9.69 | 58.1 | 4× 9 | 36 | 2092 |
| 65× 22 | 11.2 | 67.2 | 4× 8 | 32 | 2150 |
| 65× 25 | 12.8 | 76.8 | 4× 7 | 28 | 2150 |
| 75× 4.5 | 2.65 | 15.9 | 4× 32 | 128 | 2035 |
| 75× 5 | 2.94 | 17.6 | 4× 29 | 116 | 2042 |
| 75× 6 | 3.53 | 21.2 | 4× 24 | 96 | 2035 |
| 75× 8 | 4.71 | 28.3 | 4× 18 | 72 | 2038 |
| 75× 9 | 5.30 | 31.8 | 4× 16 | 64 | 2035 |
| 75× 10 | 5.89 | 35.3 | 4× 14 | 56 | 1977 |
| 75× 12 | 7.06 | 42.4 | 4× 12 | 48 | 2035 |
| 75× 16 | 9.42 | 56.5 | 4× 9 | 36 | 2034 |
| 75× 19 | 11.2 | 67.2 | 4× 8 | 32 | 2150 |
| 75× 22 | 13.0 | 78.0 | 4× 6 | 24 | 1872 |
| 75× 25 | 14.7 | 88.2 | 4× 6 | 24 | 2117 |
| 90× 4.5 | 3.18 | 19.1 | 3× 35 | 105 | 2006 |
| 90× 5 | 3.53 | 21.2 | 3× 32 | 96 | 2035 |
| 90× 6 | 4.24 | 25.4 | 3× 27 | 81 | 2057 |
| 90× 8 | 5.65 | 33.9 | 3× 20 | 60 | 2034 |
| 90× 9 | 6.36 | 38.2 | 3× 18 | 54 | 2063 |
| 90× 10 | 7.06 | 42.4 | 3× 16 | 48 | 2035 |
| 90× 12 | 8.48 | 50.9 | 3× 13 | 39 | 1985 |
| 90× 16 | 11.3 | 67.8 | 3× 10 | 30 | 2034 |
| 90× 19 | 13.4 | 80.4 | 3× 8 | 24 | 1930 |
| 90× 22 | 15.5 | 93.0 | 3× 7 | 21 | 1953 |
| 90× 25 | 17.7 | 106 | 3× 6 | 18 | 1908 |
| 100× 4.5 | 3.53 | 21.2 | 3× 32 | 96 | 2035 |
| 100× 5 | 3.92 | 23.5 | 3× 29 | 87 | 2044 |
| 100× 6 | 4.71 | 28.3 | 3× 24 | 72 | 2038 |
| 100× 8 | 6.28 | 37.7 | 3× 18 | 54 | 2036 |
| 100× 9 | 7.06 | 42.4 | 3× 16 | 48 | 2035 |
| 100× 10 | 7.85 | 47.1 | 3× 14 | 42 | 1978 |
| 100× 12 | 9.42 | 56.5 | 3× 12 | 36 | 2034 |
| 100× 16 | 12.6 | 75.6 | 3× 9 | 27 | 2041 |
| 100× 19 | 14.9 | 89.4 | 3× 7 | 21 | 1877 |
| 100× 22 | 17.3 | 104 | 3× 6 | 18 | 1872 |
| 100× 25 | 19.6 | 118 | 3× 6 | 18 | 2124 |
| 105× 4.5 | 3.71 | 22.3 | 3× 30 | 90 | 2007 |
| 105× 5 | 4.12 | 24.7 | 3× 27 | 81 | 2001 |
| 105× 6 | 4.95 | 29.7 | 3× 22 | 66 | 1960 |



| 尺寸W× t(mm) | 單位重量(kg/m) | 單支重量(kg/pcs) | 包裝方式(package) | 包裝支數(pcs/bdl) | 包裝重量(kg/bdl) |
|------------|------------|--------------|---------------|---------------|--------------|
| 105× 8 | 6.59 | 39.5 | 3× 17 | 51 | 2014 |
| 105× 9 | 7.42 | 44.5 | 3× 15 | 45 | 2002 |
| 125× 5 | 4.91 | 29.5 | 2× 34 | 68 | 2006 |
| 125× 6 | 5.89 | 35.3 | 2× 29 | 58 | 2047 |
| 125× 8 | 7.85 | 47.1 | 2× 22 | 44 | 2072 |
| 125× 9 | 8.83 | 53.0 | 2× 19 | 38 | 2014 |
| 125× 10 | 9.81 | 58.9 | 2× 17 | 34 | 2003 |
| 125× 12 | 11.8 | 70.8 | 2× 14 | 28 | 1982 |
| 125× 16 | 15.7 | 94.2 | 2× 11 | 22 | 2072 |
| 125× 19 | 18.6 | 112 | 2× 9 | 18 | 2016 |
| 125× 22 | 21.6 | 130 | 2× 8 | 16 | 2080 |
| 125× 25 | 24.5 | 147 | 2× 7 | 14 | 2058 |
| 130× 6 | 6.12 | 36.7 | 2× 28 | 56 | 2055 |
| 130× 9 | 9.18 | 55.1 | 2× 18 | 36 | 1984 |
| 130× 13 | 13.3 | 79.8 | 2× 13 | 26 | 2075 |
| 130× 16 | 16.3 | 97.8 | 2× 10 | 20 | 1956 |
| 130× 19 | 19.4 | 116 | 2× 9 | 18 | 2088 |
| 130× 22 | 22.5 | 135 | 2× 7 | 14 | 1890 |
| 130× 25 | 25.5 | 153 | 2× 7 | 14 | 2142 |
| 150× 5 | 5.89 | 35.3 | 2× 29 | 58 | 2047 |
| 150× 6 | 7.06 | 42.4 | 2× 24 | 48 | 2035 |
| 150× 8 | 9.42 | 56.5 | 2× 18 | 36 | 2034 |
| 150× 9 | 10.6 | 63.6 | 2× 16 | 32 | 2035 |
| 150× 10 | 11.8 | 70.8 | 2× 14 | 28 | 1982 |
| 150× 12 | 14.1 | 84.6 | 2× 12 | 24 | 2030 |
| 150× 16 | 18.8 | 113 | 2× 10 | 20 | 2260 |
| 150× 19 | 22.4 | 134 | 2× 8 | 16 | 2144 |
| 150× 22 | 25.9 | 155 | 2× 7 | 14 | 2170 |
| 150× 25 | 29.4 | 176 | 2× 6 | 12 | 2112 |
| 155× 6 | 7.30 | 43.8 | 2× 23 | 46 | 2015 |
| 155× 9 | 11.0 | 66.0 | 2× 15 | 30 | 1980 |
| 155× 13 | 15.8 | 94.8 | 2× 11 | 22 | 2086 |
| 155× 16 | 19.5 | 117 | 2× 9 | 18 | 2106 |
| 155× 19 | 23.1 | 139 | 2× 7 | 14 | 1946 |
| 155× 22 | 26.8 | 161 | 2× 6 | 12 | 1932 |
| 155× 25 | 30.4 | 182 | 2× 6 | 12 | 2184 |
| 180× 6 | 8.48 | 50.9 | 1× 38 | 38 | 1934 |
| 180× 9 | 12.7 | 76.2 | 1× 26 | 26 | 1981 |
| 180× 12 | 17.0 | 102 | 1× 18 | 18 | 1836 |
| 180× 16 | 22.6 | 136 | 1× 14 | 14 | 1904 |
| 180× 19 | 26.8 | 161 | 1× 12 | 12 | 1932 |
| 180× 22 | 31.1 | 187 | 1× 10 | 10 | 1870 |
| 180× 25 | 35.3 | 212 | 1× 9 | 9 | 1908 |
| 200× 6 | 9.42 | 56.5 | 1× 34 | 34 | 1921 |
| 200× 9 | 14.1 | 84.6 | 1× 22 | 22 | 1861 |
| 200× 12 | 18.8 | 113 | 1× 17 | 17 | 1921 |
| 200× 16 | 25.1 | 151 | 1× 13 | 13 | 1963 |
| 200 X 19 | 29.8 | 179 | 1× 11 | 11 | 1969 |
| 200 X 22 | 34.5 | 207 | 1× 9 | 9 | 1863 |
| 200 X 25 | 39.2 | 235 | 1× 8 | 8 | 1880 |
| 205 X 9 | 14.5 | 87 | 1× 23 | 23 | 2001 |
| 205 X 13 | 20.9 | 125 | 1× 16 | 16 | 2000 |
| 205 X 16 | 25.7 | 154 | 1× 13 | 13 | 2002 |
| 205 X 19 | 30.6 | 184 | 1× 11 | 11 | 2024 |
| 205 X 22 | 35.4 | 212 | 1× 9 | 9 | 1908 |
| 205 X 25 | 40.2 | 241 | 1× 8 | 8 | 1928 |



【五、方鋼 SQUARE BAR】



5.1 可產製尺寸 (Available Sizes)

| | 直方鋼 (Straight Square Bar) | 捲狀方鋼 (Square Bar in Coil) | |
|----------------------------|-----------------------------|-----------------------------|--------|
| 邊長 (A) | 9.5—52.5mm | 11.3—27.3mm | |
| 盤元內徑 (I.D.) | ----- | 950mm | 1000mm |
| 盤元外徑 (O.D.) | ----- | 1250mm | 1350mm |
| 直棒長度 (L) | 4—16m | ----- | |
| 包裝重量 (Weight) | ≒1500—2000kg | ≒1700—2250kg | |
| 盤捲方向 (Coiling Direction) | ----- | 順時針方向 (Clockwise) | |

5.2 可產製鋼種 (Available Grades)

同1.2和2.2 (The Same As 1.2 and 2.2, P2 and P6)

5.3 化學成份及機械性質 (Chemical and Mechanical Requirements)

同1.3和2.3 (The Same As 1.3 and 2.3, P3 and P7)



5.4 許可差 (Tolerance)

5.4.1 邊長許可差 (Permissible Variations in Side)

單位(Unit) : mm

| 項目 (Item) | 區分 (Sub-Item) | 許可差 (Tolerance) | 徑偏差 (Diametrical Variation) |
|-----------------------|---------------|-----------------|-----------------------------|
| CNS 8279 JIS G3191 | A < 16 | ± 0.40 | 0.56 max |
| | 16 ≤ A < 28 | ± 0.50 | 0.70 max |
| | 28 ≤ A | ± 1.8% * A | 2.52% * A max |
| JIS G4051 G4053 | A ≤ 26 | ± 0.40 | 0.56 max |
| | 26 < A | ± 1.5% * A | 2.1% * A max |

5.4.2 長度許可差 (Permissible Variations in Length)

同1.4.2 (The Same As 1.4.2, P4)

5.4.3 直度許可差 (Permissible Variations in Straightness)

同1.4.3 (The Same As 1.4.3, P4)

5.5 標記及包裝 (Standard Marking and Packing)

5.5.1 鋼種顏色標示 (Color Marking on Section and Tag)

同1.5.1 (The Same As 1.5.1, P5)

5.5.2 直方鋼六米包裝標準 (Packing of Square Bar in 6m Length)

| 邊長 A(mm) | 單位重量 (kg/m) | 單支重量 (kg/pcs) | 包裝支數* (pcs/bdl) | 包裝重量* (kg/bdl) | 邊長 A(mm) | 單位重量 (kg/m) | 單支重量 (kg/pcs) | 包裝支數* (pcs/bdl) | 包裝重量* (kg/bdl) |
|-------------|----------------|------------------|--------------------|-------------------|-------------|----------------|------------------|--------------------|-------------------|
| 9.5 | 0.708 | 4.25 | 432 | 1836 | 30 | 7.06 | 42.4 | 49 | 2078 |
| 10 | 0.785 | 4.71 | 392 | 1846 | 32 | 8.04 | 48.2 | 42 | 2024 |
| 12 | 1.13 | 6.78 | 220 | 1492 | 33.7 | 8.92 | 53.5 | 42 | 2247 |
| 16 | 2.01 | 12.1 | 165 | 1996 | 38 | 11.3 | 67.8 | 30 | 2034 |
| 19 | 2.83 | 17.0 | 117 | 1989 | 40 | 12.6 | 75.6 | 30 | 2268 |
| 21 | 3.46 | 20.8 | 96 | 1997 | 45 | 15.9 | 95.4 | 20 | 1908 |
| 22 | 3.80 | 22.8 | 87 | 1984 | 50 | 19.6 | 118 | 16 | 1888 |
| 25 | 4.91 | 29.5 | 67 | 1976 | 52.5 | 21.6 | 130 | 16 | 2080 |
| 27.3 | 5.85 | 35.1 | 56 | 1966 | | | | | |

* : 表包裝之目標值 (Aim value)



【六、鋼筋 REBAR】



6.1 可產製尺寸 (Available Sizes)

| | 光面鋼筋 (Round Bar) | | 竹節鋼筋 (Deformed Bar) | |
|--------------------------|--------------------|-------------------|---------------------|-------------------|
| | 直棒 (Straight Form) | 捲狀 (Coil Form) | 直棒 (Straight Form) | 捲狀 (Coil Form) |
| 尺寸 (Size) | 9-103mm | 13-42mm | D10-D57 | D13-D36 |
| 盤元內徑 (I.D.) | — | 950mm 1000mm | — | 950mm 1000mm |
| 盤元外徑 (O.D.) | — | 1250mm 1350mm | — | 1250mm 1350mm |
| 直棒長度 (L) | 5-14m | — | 6-18m | — |
| 盤捲方向 (Coiling Direction) | — | 順時針方向 (Clockwise) | — | 順時針方向 (Clockwise) |



6.2 可產製鋼種 (Available Grades)

| 分類 (Division) | 鋼種記號 (Symbol) | |
|---------------------|---------------|---|
| 光面鋼筋 (Round Bar) | CNS 560 | SR240, SR300 |
| | JIS G3112 | SR235, SR295 |
| | ATSM 615 | Gr.40, Gr.60, Gr.75, Gr.100 |
| | ATSM A706 | Gr.60 |
| 竹節鋼筋 (Deformed Bar) | CNS 560 | SD280, SD280W, SD420, SD420W, SD490W, SD550W, SD690 |
| | JIS G3112 | SD295, SD345, SD390, SD490 |
| | ASTM A615 | Gr.40, Gr.60, Gr.75, Gr.100 |
| | ASTM A706 | Gr.60 |

6.3 化學成份及機械性質 (Chemical and Mechanical Requirements)

6.3.1 化學成份 (Chemical Requirements)

| 分類 (Division) | 鋼種記號 (Symbol) | 化學成份 (Composition)% | | | | | |
|---------------|---------------|---------------------|---------|----------|----------|---------|---------|
| | | C | Mn | P | S | Si | C.E. |
| ASTM A615 | GR.40 | — | — | 0.060max | — | — | — |
| | GR.60 | — | — | 0.060max | — | — | — |
| | GR.75 | — | — | 0.060max | — | — | — |
| | GR.100 | — | — | 0.060max | — | — | — |
| ASTM A706 | GR.60 | 0.30max | 1.50max | 0.035max | 0.045max | 0.50max | 0.55max |
| CNS 560 | SR240 | — | — | 0.060max | 0.060max | — | — |
| | SR300 | — | — | 0.060max | 0.060max | — | — |
| | SD280 | — | — | 0.060max | 0.060max | — | — |
| | SD420 | 0.32max | 1.50max | 0.050max | 0.050max | 0.50max | 0.57max |
| | SD280W | 0.30max | 1.50max | 0.035max | 0.045max | 0.50max | 0.55max |
| | SD420W | 0.30max | 1.50max | 0.035max | 0.045max | 0.50max | 0.55max |
| | SD490W | 0.30max | 1.50max | 0.035max | 0.045max | 0.50max | 0.55max |
| | SD550W | 0.30max | 1.50max | 0.035max | 0.045max | 0.50max | 0.55max |
| | SD690 | — | — | — | 0.06max | — | — |
| JIS G3112 | SR235 | — | — | 0.050max | 0.050max | — | — |
| | SR295 | — | — | 0.050max | 0.050max | — | — |
| | SD295 | 0.27max | 1.50max | 0.050max | 0.050max | 0.55max | — |
| | SD345 | 0.27max | 1.60max | 0.040max | 0.040max | 0.55max | 0.60max |
| | SD390 | 0.29max | 1.80max | 0.040max | 0.040max | 0.55max | 0.65max |
| | SD490 | 0.32max | 1.80max | 0.040max | 0.040max | 0.55max | 0.70max |

註1. CE值計算公式 CNS及ASTM為 $CE\% = (C + Mn/6 + Cu/40 + Ni/20 + Cr/10 - Mo/50 - V/10)\%$
 JIS為 $CE\% = (C + Mn/6 + Si/24 + Ni/40 + Cr/5 + Mo/4 + V/14)\%$

6.3.2 機械性質 (Mechanical Requirements)

(1) CNS

| 鋼種記號 (Symbol) | 降伏強度 (Y.S.)N/mm ² | 抗拉強度 (T.S.)N/mm ² | 抗拉強度/ 降伏強度 (TS/YS) | 試片 (Test Piece) | 伸長率% (Elongation) | 彎曲特性(Bend Property) | |
|------------------|---------------------------------|---------------------------------|--------------------------|--------------------|----------------------|---------------------|---|
| | | | | | | 角度(Angle) | 直徑(Diameter) |
| SR240 | 240min | 380min | — | NO.2 | 20min | 180° | 3D |
| | | | | NO.14A | 22min | | |
| SR300 | 300min | 480min | — | NO.2 | 18min | 180° | 4D |
| | | | | NO.14A | 19min | | |
| SD280 | 280min | 420min | — | NO.2 | 18min | 180° | D10-D16 3.5D over D19 5D |
| | | | | NO.14A | 19min | | |
| SD280W | 280~380 | 420min | 1.25min | NO.2 | 18min | 180° | D10-D16 3D, D19-D25 4D D29-D36 6D, Over D39 8D |
| | | | | NO.14A | 19min | | |
| SD420 | 420min | 620min | — | NO.2 | 13min | 180° | D10-D16 3.5D D19-D25 5D D29-D36 7D |
| | | | | NO.14A | 14min | | |
| SD420W | 420~540 | 550min | 1.25min | NO.2 | 13min | 180° | D10-D16 3D D19-D25 4D D29-D36 6D Over D39 8D |
| | | | | NO.14A | 14min | | |
| SD490W | 420~615 | 620min | 1.25min | NO.2 | 13min | 180° | D10-D16 3D D19-D25 4D D29-D36 6D Over D39 8D |
| | | | | NO.14A | 14min | | |
| SD550W | 550~675 | 690min | 1.25min | NO.2 | 12min | 180° | D10-D16 3.5D D19-D25 5D D29-D36 7D Over D39 9D |
| | | | | NO.14A | 13min | | |
| SD690W | 690~815 | 860min | 1.15min | NO.2 | 10min | 180° | D10-D16 3.5D D19-D25 5D D29-D36 7D |
| | | | | NO.14A | 10min | | |

(2) ASTM

| 鋼種記號 (Symbol) | 降伏強度 (Y.S.)psi (MPa) | 抗拉強度 (T.S.)psi (MPa) | 抗拉強度/ 降伏強度 (TS/YS) | 稱號 (Bar No) d | 伸長率% (Elongation) g.l.=8in | 彎曲特性(Bend Property) | |
|------------------|----------------------------|----------------------------|--------------------------|---------------------|----------------------------------|-------------------------|--|
| | | | | | | 直徑, 角度(Diameter, Angle) | |
| A615 GR.40 | 40,000min (280min) | 60,000min (420min) | — | 3 | 11min | 3.5 d, 180° | |
| | | | | 4, 5 | 12min | 3.5 d, 180° | |
| | | | | 6 | 12min | 5 d, 180° | |
| A615 GR.60 | 60000 (420min) | 90,000min (620min) | — | 3, 4, 5 | 9min | 3.5 d, 180° | |
| | | | | 6 | 9min | 5 d, 180° | |
| | | | | 7, 8 | 8min | 5 d, 180° | |
| | | | | 9, 10, 11 | 7min | 7 d, 180° | |
| | | | | 14, 18 | 7min | 9 d, 90° | |
| A615 GR.75 | 75000 (520min) | 100,000 (690min) | — | 3, 4, 5, 6, 7, 8 | 7min | 5 d, 180° | |
| | | | | 9, 10, 11 | 6min | 7 d, 180° | |
| | | | | 14, 18 | 6min | 9 d, 90° | |
| A615 GR.100 | 100,000min (790min) | 115,000min (790min) | — | 3, 4, 5, 6, 7, 8 | 7min | 5 d, 180° | |
| | | | | 9, 10, 11 | 6min | 7 d, 180° | |
| | | | | 14, 18 | 6min | 9 d, 90° | |
| A706 GR.60 | 60,000-78,000 (420-540) | 80,000 min (550min) | 1.25min | 3, 4, 5 | 14min | 3 d, 180° | |
| | | | | 6 | 14min | 4 d, 180° | |
| | | | | 7, 8 | 12min | 4 d, 180° | |
| | | | | 9, 10, 11 | 12min | 6 d, 180° | |
| | | | | 14, 18 | 10min | 8 d, 180° | |

(3) JIS

| 鋼種記號 (Symbol) | 降伏強度 (Y.S.)N/mm ² | 抗拉強度 (T.S.)N/mm ² | 試片 (Test Piece) | 伸長率% (Elongation) | 彎曲特性(Bend Property) | |
|------------------|---------------------------------|---------------------------------|--------------------|----------------------|---------------------|---------------------|
| | | | | | 角度 (Angle) | 半徑(Radius) |
| SR235 | 235min | 380~520 | NO.2 | 20min | 180° | 標稱直徑1.5倍 |
| | | | NO.14A | 22min | | |
| SR295 | 295min | 440~600 | NO.2 | 18min | 180° | D16以下 標稱直徑1.5倍 |
| | | | NO.14A | 19min | | 超過16 標稱直徑2倍 |
| SD295 | 295min | 440~600 | 相當於 NO.2 | 16min | 180° | D16以下 標稱直徑1.5倍 |
| | | | 相當於 NO.14A | 17min | | 超過16 標稱直徑2倍 |
| SD345 | 345~440 | 490min | 相當於 NO.2 | 18min | 180° | D16以下 標稱直徑1.5倍 |
| | | | 相當於 NO.14A | 19min | | 超過D16, D41以下 標稱直徑2倍 |
| | | | | | | D51 標稱直徑2.5倍 |
| SD390 | 390~510 | 560min | 相當於 NO.2 | 16min | 180° | 標稱直徑2.5倍 |
| | | | 相當於 NO.14A | 17min | | |
| SD490 | 490~625 | 620min | 相當於 NO.2 | 12min | 90° | 標稱直徑2倍 |
| | | | 相當於 NO.14A | 13min | | |



6.4 CNS形狀及尺度許可差 (Shape and Tolerance on Dimension of CNS)

6.4.1竹節鋼筋尺寸、質量及竹節限制 (Dimensions, Masses and Permissible Limits of Deformed Bars)

| 稱號 (Designation) | 標示 代號 (No) | 單位質量 (Nominal Mass) (kg/m) | 標稱直徑 (Diameter) (mm) | 標稱剖面積 (Cross Section Area) (mm ²) | 標稱周長 (Perimeter) (cm) | 節之尺度 (Deformation Requirements) | | | |
|---------------------|------------------|-------------------------------------|----------------------------|--|-----------------------------|------------------------------------|------------------|-----|----------------------|
| | | | | | | 節距 (Spacing) max | 節之高度 (Height) | | 間隙寬度 (Gap) max |
| | | | | | | | min | max | |
| D10 | 3 | 0.560 | 9.53 | 71.33 | 3.0 | 6.7{4.8} | 0.4 | 0.8 | 3.7 |
| D13 | 4 | 0.994 | 12.7 | 126.7 | 4.0 | 8.9{6.4} | 0.5 | 1.0 | 5.0 |
| D16 | 5 | 1.56 | 15.9 | 198.6 | 5.0 | 11.1{8.0} | 0.7 | 1.4 | 6.2 |
| D19 | 6 | 2.25 | 19.1 | 286.5 | 6.0 | 13.3{9.6} | 1.0 | 2.0 | 7.5 |
| D22 | 7 | 3.04 | 22.2 | 397.1 | 7.0 | 15.6{11.1} | 1.1 | 2.2 | 8.7 |
| D25 | 8 | 3.98 | 25.4 | 506.7 | 8.0 | 17.8{12.7} | 1.3 | 2.6 | 10.0 |
| D29 | 9 | 5.08 | 28.7 | 646.9 | 9.0 | 20.1{14.4} | 1.4 | 2.8 | 11.3 |
| D32 | 10 | 6.39 | 32.2 | 814.3 | 10.1 | 22.6{16.1} | 1.6 | 3.2 | 12.6 |
| D36 | 11 | 7.90 | 35.8 | 1007 | 11.3 | 25.1{17.9} | 1.8 | 3.6 | 14.1 |
| D39 | 12 | 9.57 | 39.4 | 1219 | 12.4 | 27.6{19.7} | 2.0 | 4.0 | 15.5 |
| D43 | 14 | 11.4 | 43.0 | 1452 | 13.5 | 30.1{21.5} | 2.1 | 4.2 | 16.9 |
| D50 | 16 | 15.5 | 50.2 | 1979 | 15.8 | 35.1{25.1} | 2.5 | 5.0 | 19.7 |
| D57 | 18 | 20.2 | 57.3 | 2579 | 18.0 | 40.1{28.7} | 2.9 | 5.8 | 22.5 |

{ }內最大節距適用於螺紋節鋼筋。

6.4.2鋼筋長度許可差 (Permissible Variations in Length)

| 長度 (Length) | 許可差 (Tolerance) |
|-------------|---|
| $L \leq 7m$ | +0 ~ +40mm |
| $7m < L$ | 每增加1米，容許差上限增加5mm，但以120mm為限 (Add 5mm to plus side tolerance for every increase of 1m or its fraction, shall be limited to 120mm) |

6.4.3鋼筋直徑及質量許可差 (Permissible Variations in Diameter and Mass)

| | 直徑或稱號 (Diameter or Designation) | 直徑許可差 (Diameter Tolerance) | 單支質量許可差 (Mass Tolerance) |
|------------------------|------------------------------------|-------------------------------|-----------------------------|
| 光面鋼筋 (Round Bar) | $D < 16mm$ | $\pm 0.4mm$ | — |
| | $16mm \leq D < 28mm$ | $\pm 0.5mm$ | |
| | $28mm \leq D$ | $\pm 1.8\% * D$ | |
| 竹節鋼筋 (Deformed Bar) | D10-D13 | — | $\pm 6\%$ |
| | D16-D25 | | $\pm 5\%$ |
| | Over D25 | | $\pm 4\%$ |



6.5 標記及包裝 (Standard Marking and Packing)

6.5.1 竹節鋼筋軋印痕標示 (Rolling Mark on Each Piece)



6.5.2 截面顏色標示 (Color Marking on One Side Section)

| 規格 (Spec.) | 鋼種記號 (Symbol) | 顏色 (Color) |
|------------|---------------|-----------------|
| CNS 560 | SR240 | 黃色 (Yellow) |
| | SR300 | 白色 (White) |
| | SD280 | 黃色 (Yellow) |
| | SD280W | 白色 (White) |
| | SD420 | 紅色 (Red) |
| | SD420W | 綠色 (Green) |
| | SD490W | 藍色 (Blue) |
| | SD550W | 橘色 (Orange) |
| | SD690 | 棕色 (Brown) |
| ASTM A615 | Gr.40 | 黃色 (Yellow) |
| | Gr.60 | 粉紅色 (Pink) |
| | Gr.75 | 粉紅色 (Pink) |
| | Gr.100 | 棕色 (Brown) |
| ASTM A706 | Gr.60 | 綠色 (Green) |
| JIS G3112 | SR235 | 紅色 (Red) |
| | SR295 | 白色 (White) |
| | SD295 | 無 (Not Applied) |
| | SD345 | 黃色 (Yellow) |
| | SD390 | 綠色 (Green) |
| | SD490 | 藍色 (Blue) |





6.5.3 包裝重量 (Weight of Package)

(1) 六米光面鋼筋 (Round Bar in 6m Length)

| 9-10mm | 11-14mm | 15-100mm |
|---------|---------|----------|
| 1.2 ton | 1.5 ton | 2.0 ton |

(2) 竹節鋼筋 (Straight Deformed Bar)

| | | 6-7m | 8m | 9-11m | 12-18m |
|-------------------|----------|---------|---------|---------|---------|
| 普通包裝 (Normal) | D10-D16 | 1.5 ton | 2.0 ton | 2.5 ton | 3.0 ton |
| | Over D16 | 2.2 ton | 2.2 ton | 2.2 ton | 3.0 ton |
| 小包包裝 (Sub-Bundle) | D10-D16 | - | - | 2.5 ton | 3.0 ton |

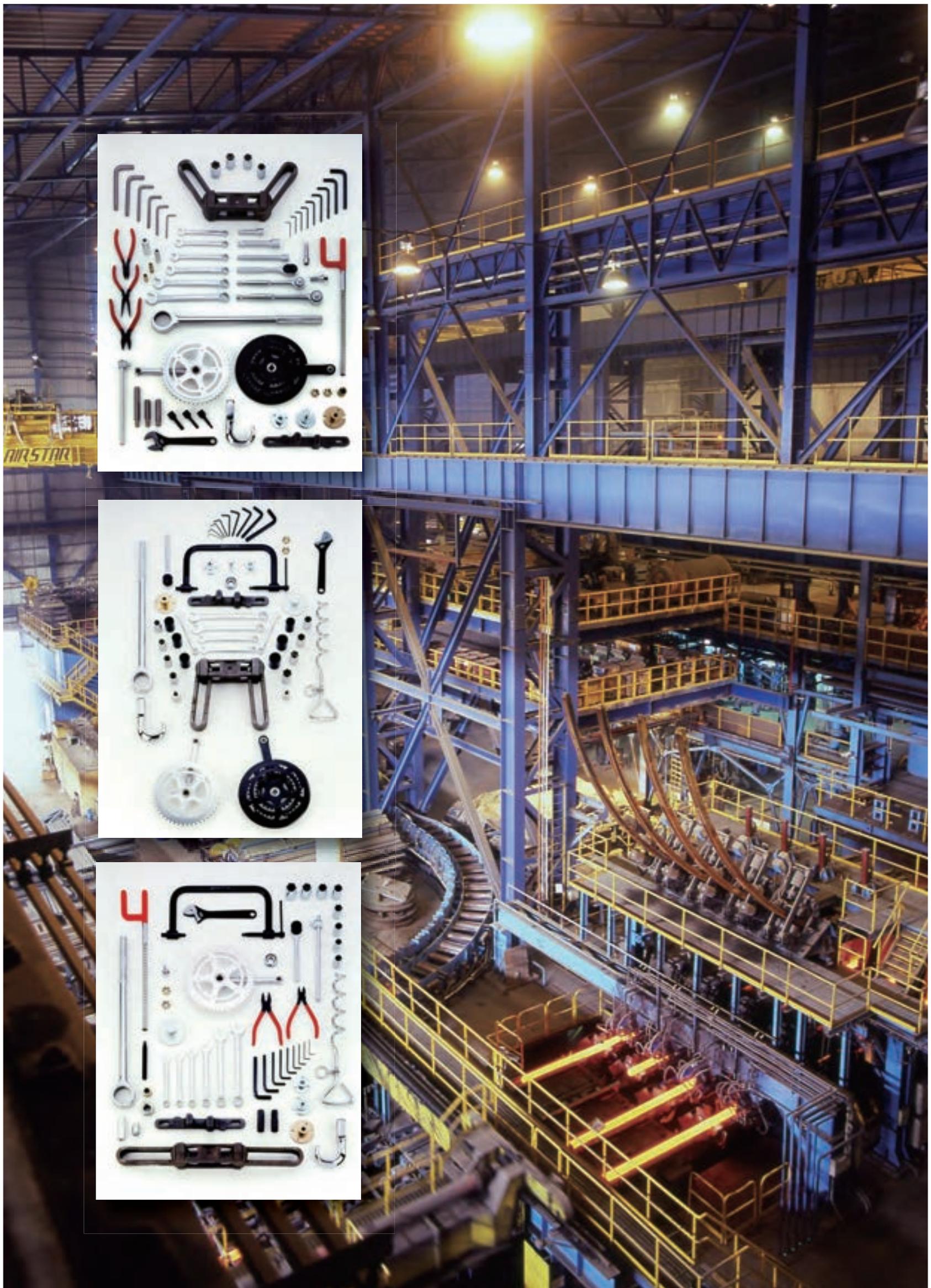
6.5.4 包裝支數 (Pieces of Package)

(1) 六米光面鋼筋 (Round Bar in 6m Length)

同 1.5.2 (The Same As 1.5.2 P5)

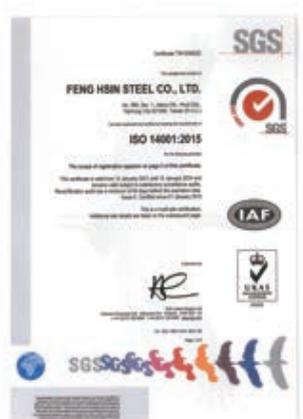
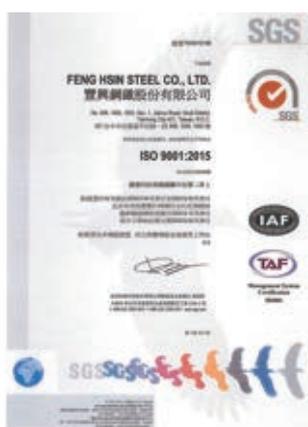
(2) 竹節鋼筋小包包裝 (Sub-Bundle Package of Straight Deformed Bar) (僅供參考)

| | | 6m | 7m | 8m | 9m | 10m | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m |
|-----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| D10 | 小包支數 (pcs/sub-bdl) | - | - | - | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| | 小包捆數 (sub-bdl/pack) | - | - | - | 11 | 11 | 11 | 11 | 10 | 9 | 9 | 8 | 8 | 7 |
| | 總支數 (pcs/pack) | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 400 | 360 | 360 | 320 | 320 | 280 |
| D13 | 小包支數 (pcs/sub-bdl) | - | - | - | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| | 小包捆數 (sub-bdl/pack) | - | - | - | 8 | 8 | 8 | 8 | 8 | 7 | 7 | 6 | 6 | 6 |
| | 總支數 (pcs/pack) | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 210 | 210 | 180 | 180 | 180 |
| D16 | 小包支數 (pcs/sub-bdl) | - | - | - | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| | 小包捆數 (sub-bdl/pack) | - | - | - | 8 | 8 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 5 |
| | 總支數 (pcs/pack) | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 140 | 140 | 120 | 120 | 120 | 100 |



品質實績 Quality Assurance

- 標準檢驗局正字標記工廠
- 鋼鐵業輻射偵檢作業合格工廠
- SGS國際品保制度(ISO 9001)認證公司
- SGS環境管理系統(ISO 14001)認證公司
- 碳鋼低合金鋼化學成份分析獲TAF實驗室認證通過
- 營建工程測試領域獲TAF實驗室認證通過
- 熱軋構造用圓棒鋼、方鋼、角鋼、扁鋼及槽鋼獲歐盟認證通過(CE Mark)
- 一般構造用鋼、機械構造用碳素鋼和鋼筋獲日本品質保證機構承認為JIS Mark產品
- IATF 16949汽車品質管理系統認證通過



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 勞者多能乃榮身
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 計劃週延謀後動
 資源厚生環保新
 技取退倘戒守舊
 和樂親切天地喜
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