

# ● Cold-rolled steel



We are a credible Provider of **CR Coils** in Pohang, Korea. Our Coils are manufactured using the latest technology ensuring high tensile strength and perfect finishing. We make use of premium metal to manufacture them so as to provide perfect finishing and paint ability. The Product that we offer has wide applications in automobile, electrical, furniture and many other industries. Our Coils are reasonably priced.

## 1. CR-Coil Introduce

Cold-rolled steel is currently applied to various fields including automobiles, electric household appliances, furniture and office equipment.

In particular, as the sophistication of our economy accelerates, cold rolled sheet has become a necessity in today's society.

POSCO's cold-rolled steel products have clean surface and excellent drawability.

They are also characterized by their superior formality and paintability.

We at POSCO are making every effort to satisfy our customers through top quality production and sales management and continued improvement in our production system toward an environmental friendly steel industry.

## 2. Properties

### 1) Cold-Rolled Steel

| Classification | Standard        | Characteristics   | Usage                                      |
|----------------|-----------------|---|--|
| <b>Class 1</b> | CSP 1<br>CSP 1D | - Used for exposed or unexposed parts where bending, shallow drawing, forming and welding are involved                    | - Refrigerator doors<br>Drums/ Furniture   |
| <b>Class 2</b> | CSP 2           | - Used for fabricating parts which require drawability  | - Automobile oil pans                      |
| <b>Class 3</b> | CSP 3           | - Used for deep drawing parts which require more drawability than CSP 2   | - Roofs, fenders and hoods of automobiles  |
|                | CSP 3N          | - Known for non-aging deep-drawing quality, which guarantees consistent steel properties even after a long period of time |  |
|                | CSP 3E          | - Used for automobile parts which require more drawability than CSP 3N  | - Quarters and springhouses of automobiles |
|                | CSP 3X          | - Used for automobile parts which require more drawability than CSP 3E  | - Car side panels<br>Motorcycle fuel tanks |

### 2) Structural & Hard Quality Cold-Rolled Steel

| Classification            | Standard  | Characteristics  | Usage                                   |
|---------------------------|---|--|---|
| <b>Structural Quality</b> | CSP 30<br>CSP 32<br>CSP 34<br>CSP 37<br>CSP 37P<br>CSP 58 | - Used in structural materials which do not need drawability but need strength<br>(The minimum value of tensile strength is guaranteed.) | - Structural materials for construction |
| <b>Hard Quality</b>       | CSP 1-H<br>CSP 1-2H<br>CSP 1-4H<br>CSP 1-8H               | - When customer makes a request, strip hardness is guaranteed  | - Coated pipes,<br>motor core           |

### 3) Cold-Rolled Steel for Porcelain Enameling

| Classification      | Standard                         | Characteristics   | Usage  |
|---------------------|----------------------------------|---|--|
| Porcelain Enameling | CESP 2-C<br>CESP 2-D<br>CESP 2-P | - Manufactured with extremely low carbon steel to which titanium and boron are added. Therefore, this steel has excellent drawability and the characteristics that ensure the best adhesion for porcelain enameling and the elimination of fish scales and pin holes. | - Washers<br>- Bathtubs<br>- Gas ovens<br>- Kitchenware<br>- Exterior materials for construction |

### 4) High Strength Steel

| Classification     | Standard                              | Characteristics  | Usage  |
|--------------------|---------------------------------------|--|--|
| Commercial Quality | CHSP 45C<br>CHSP 60C                  | - Adding hardening elements, such as Nb, Cr and V, to low carbon steel enhances its strength and yield point. It has excellent crack resistance and is used for structural purposes where strength is needed.  | - Seats, rail levers and parking brakes of automobiles |
| Drawing            | CHSP 35R<br>CHSP 40R<br>*CHSP 45R     | - This is high strength steel with solid solution hardening elements, such as phosphate. It is used in automobile panels for its increased strength.   | - Center floors and brackets of automobiles            |
| Deep Drawing       | CHSP 35E<br>CHSP 40E<br>CHSP 45E      | - This is ultra-low carbon steel with special elements added. It has a high elongation rate and is used in deep drawing parts of automobile outer panels.  | - Outer panels, such as fenders and hoods              |
| Low Yield Ratio    | *CHSP 35EB                            | - In constant temperature, the steel forms a ferrite matrix grain and has a lower yield strength ratio than that of high strength steel. It is used as a strength enhancing material   |  |
| Bake Hardening     | *CHSP 60DP<br>CHSP 80TR<br>CHSP 100DP | - It has a lower yield ratio compared with solid solution hardening steel. Therefore it is used as a strength-enhancing material which requires drawability. By baking after press forming, the yield strength of the steel is heightened and its dent-resistance is improved. The formability is the same as CHSP 35E | - Doors and bumpers of automobiles                     |

Remark : \*Specifications with an asterisk require prior negotiation

## • Standard Specification

| Use                        |             | Standard          |                    |                     |                    | Tensile strength        | (Elongation%) |
|----------------------------|-------------|-------------------|--------------------|---------------------|--------------------|-------------------------|---------------|
|                            |             | POSCO             | KS                 | JIS                 | ASTM               | (KGF/ mm <sup>2</sup> ) |               |
| For general use            |             | CSP1              | SCP1               | SPCC                | A366               | 28                      | 32-37         |
| For processing             |             | CSP2              | SCP2               | SPCD                | A619               | 28                      | 36-41         |
| For trepanning (non aging) |             | CSP3              | SCP3               | SPCE                | A620               | 28                      | 36-43         |
| For extra deep drawing     |             | CSP3E             | -                  | -                   | -                  | 28                      | 44-50         |
| Structural purpose         |             | CSP30,32,34,37,58 | -                  | -                   | A611-A,B,C,D1,D2,E | 30-58                   | 26-20         |
| For enameled steel         |             | ENACO<br>ATIP1.2D | SPP                | SPP                 | A424-1             | 28                      | 29-17         |
| High-tension steel         | General use | CHSP45C,50C,60C   | SPFC35,40,45,50,60 | SPFC340,390,440,590 | -                  | 45-60                   | 29-17         |
|                            | Processing  | CHSP35R,40R,45R   |                    |                     |                    | 35-45                   | 39-27         |
|                            | Trepanning  | CHSP35E,38E,40E   | -                  | -                   | -                  | 35-40                   | 37-31         |
| F/H                        |             |                   | SCP1-H ½H          | SACC-1,2            |                    |                         |               |