

# HOT ROLLED STEEL SHEET PILES

Steel Sheet Piles that are widely used for earth retention, river embankments, quay wall of ports, retaining walls, cut off walls, earthquake strengthening structures, land reclamation, cofferdams and in many other types of construction works are becoming increasingly important.

UNIK supplies “U” Shaped Hot rolled steel sheet piles that conform to JIS standard JIS 5528: 2006, 2012 Grade SY 295 & SY390.

## Specification of Sheet Piles

# STEEL SHEET PILES

(Grade SY295 or SY390)

JIS A 5528 : 2006, 2012 | JIS STANDARD

| Type                 | Dimension                  |                             |                      | Per pile                          |                                      |                                    |                   | Per 1 m of pile wall width           |                                         |                                       |                                |
|----------------------|----------------------------|-----------------------------|----------------------|-----------------------------------|--------------------------------------|------------------------------------|-------------------|--------------------------------------|-----------------------------------------|---------------------------------------|--------------------------------|
|                      | Effective width<br>W<br>mm | Effective height<br>h<br>mm | Thickness<br>t<br>mm | Sectional area<br>cm <sup>2</sup> | Moment of inertia<br>cm <sup>4</sup> | Section modulus<br>cm <sup>3</sup> | Unit mass<br>kg/m | Sectional area<br>cm <sup>2</sup> /m | Moment of inertia<br>cm <sup>4</sup> /m | Section modulus<br>cm <sup>3</sup> /m | Unit mass<br>kg/m <sup>2</sup> |
| NS-SP-Ⅱ              | 400                        | 100                         | 10.5                 | 61.18                             | 1,240                                | 152                                | 48.0              | 153.0                                | 8,740                                   | 874                                   | 120                            |
| NS-SP-Ⅲ              | 400                        | 125                         | 13.0                 | 76.42                             | 2,220                                | 223                                | 60.0              | 191.0                                | 16,800                                  | 1,340                                 | 150                            |
| NS-SP-Ⅲ <sub>A</sub> | 400                        | 150                         | 13.1                 | 74.40                             | 2,790                                | 250                                | 58.4              | 186.0                                | 22,800                                  | 1,520                                 | 146                            |
| NS-SP-Ⅳ              | 400                        | 170                         | 15.5                 | 96.99                             | 4,670                                | 362                                | 76.1              | 242.5                                | 38,600                                  | 2,270                                 | 190                            |
| NS-SP-Ⅴ <sub>L</sub> | 500                        | 200                         | 24.3                 | 133.8                             | 7,960                                | 520                                | 105               | 267.6                                | 63,000                                  | 3,150                                 | 210                            |
| NS-SP-Ⅵ <sub>L</sub> | 500                        | 225                         | 27.6                 | 153.0                             | 11,400                               | 680                                | 120               | 306.0                                | 86,000                                  | 3,820                                 | 240                            |
| NS-SP-Ⅱ <sub>w</sub> | 600                        | 130                         | 10.3                 | 78.70                             | 2,110                                | 203                                | 61.8              | 131.2                                | 13,000                                  | 1,000                                 | 103                            |
| NS-SP-Ⅲ <sub>w</sub> | 600                        | 180                         | 13.4                 | 103.9                             | 5,220                                | 376                                | 81.6              | 173.2                                | 32,400                                  | 1,800                                 | 136                            |
| NS-SP-Ⅳ <sub>w</sub> | 600                        | 210                         | 18.0                 | 135.3                             | 8,630                                | 539                                | 106               | 225.5                                | 56,700                                  | 2,700                                 | 177                            |

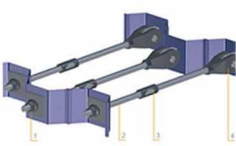
## TOLERANCES

JIS A 5528 : 2006, 2012

HOT ROLLED STEEL SHEET PILE "U" SHAPE

| Dimension                             |             | Tolerance                                 |
|---------------------------------------|-------------|-------------------------------------------|
| Height                                |             | ±4%                                       |
| Width (W <sub>o</sub> )               |             | +10<br>-5                                 |
| Thickness                             | t < 10      | ± 1.0                                     |
|                                       | 10 ≤ t < 16 | ± 1.2                                     |
|                                       | t ≥ 16      | ± 1.5                                     |
| Length (L)                            |             | +Not Specified<br>0                       |
| Deflection                            | L ≤ 10 m.   | Full Length (M) x 0.12% max.              |
|                                       | L > 10 m.   | Full Length - 10 m. x 0.10% + 12 mm. max. |
| Camber                                | L ≤ 10 m.   | Full Length (M) x 0.25% max.              |
|                                       | L > 10 m.   | Full Length - 10 m. x 0.20% + 25 mm. max. |
| Difference in Vertically Cut Sections |             | Within 4% of Width                        |

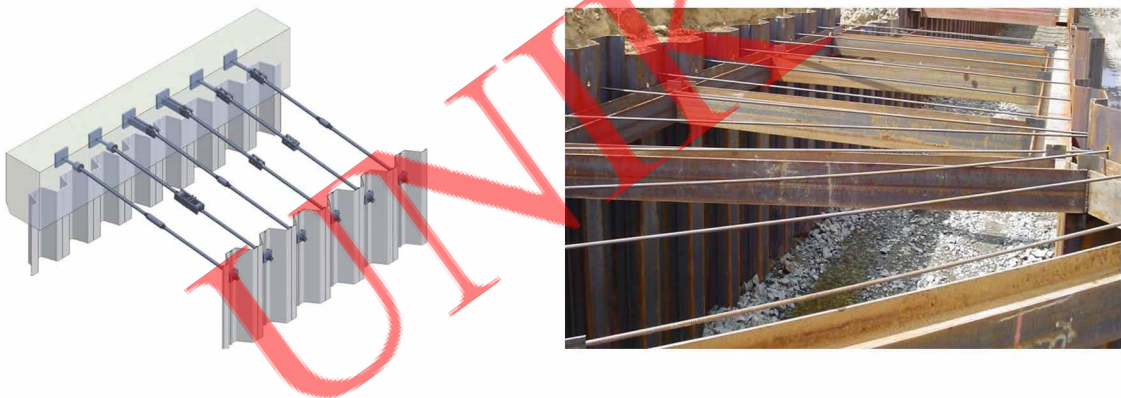
UNIK also supplies below different types of steel sheet piles and accessories upon project requirements. UNIK delivers the materials very fast due to the effective logistic system within our business networks.

|                                                                                    |                                                                                    |                                                                                    |                                                                                      |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Hot Rolled Z Sheet pile                                                            | Cold Rolled U Sheet pile                                                           | Cold Formed Z sheet pile                                                           | Straight Web Sheet pile                                                              |
|   |   |   |   |
| Pipe Piles                                                                         | Sheet Piles Accessories                                                            |                                                                                    |                                                                                      |
|                                                                                    | Corner Piles                                                                       | Steel Tie Rods                                                                     | Wailing Beams                                                                        |
|  |  |  |  |

### 1. Tie back / anchoring system

Most sheet pile retaining walls need a supplementary support at the top, in addition to the embedment in the soil. Temporary cofferdams generally use walers and struts to cross-brace the inside excavation. Permanent or large retaining walls are often tied back to an anchor wall installed at a certain distance behind the wall.

UNIK can supply a complete package which includes the steel sheet piles, tie-rods, walers and any other accessory required for the execution of a sheet pile wall.



### Why UNIK Sheet Piles

- ✓ Wide range of sections for various different application areas.
- ✓ High reliability
- ✓ Sourcing from world class steel mills
- ✓ Excellent workability
- ✓ Close-proximity installation
- ✓ 100% interlock integrity
- ✓ Excellent structural properties
- ✓ Optimal reusability