Stress Verification

When only the effect of bending moment effect is considered, the following verification formula can be applied.

For the H-shape:

$$M \leq \alpha \cdot Z_H \cdot \sigma_H$$

where α : Safety factor, for the allowable stress design, 1.0 is applied.
Z_H : Section modulus of the Hat-type and H-shape combined sheet pile per pile at H-shape side.
σ_H : Yield strength of H-shape, for the allowable stress design, the allowable stress is applied.

For the Hat-type sheet pile:

$$M \leq \alpha \cdot Z_{Hat} \cdot \sigma_{Hat}$$

where α : Safety factor, for the allowable stress design, 1.0 is applied.
Z_{Hat} : Section modulus of the Hat-type and H-shape combined sheet pile per pile at Hat-type side.
σ_{Hat} : Yield strength of Hat-type, for the allowable stress design, the allowable stress is applied.

Reference Table for Steel Materials and Yield Strength for steel sheet piles

Steel name	Minimum yield strength (N/mm^2)
SYW295	295min.
SYW390	390min
SYW430*1	430min
S355GP	355min
S430GP	430min
A572Gr.50	345min

*1 Please contact us detail in advance to order.
* For other steel name, please contact us.

Reference Table for Steel Materials and Yield Strength for H-shape

Designation	Minimum yield Strength Nominal Thickness(t ≦16mm)	Minimum yield Strength Nominal Thickness(16 ＜ t ≦40)
SM490A	325	315
SM490YA	365	355
S275JR	275	265
S355JR	355	345
A572 Gr.50	345	345

* For other Designation, please contact us.