CLAIMS

[Claim 1]

A Z-shaped steel sheet pile, comprising a web portion; flange portions disposed at both ends of the web portion; and joint portions disposed at ends of the flange portions,

wherein protrusions are provided on outer-surface-side portions of the flange portions of the Z-shaped steel sheet pile, on outer-surface-side portions of the web portion of the Z-shaped steel sheet pile, or on at least one outer-surface-side portion of the flange portions and at least one outer-surface-side portion of the web portion, at positions on both sides of a center of the web portion, and

the protrusions are approximately plate-like, disposed approximately parallel to the direction of the length of the Z-shaped steel sheet pile, and attached at an angle to the outer surface of the flange portion or to the outer surface of the web portion.

[Claim 2]

The Z-shaped steel sheet pile according to Claim 1, wherein the protrusion provided on the web portion is disposed at a certain distance from the center of the web portion, the certain distance being half or more than half a distance from the center of the web portion to an outer surface of a corresponding one of the flange portions.

[Claim 3]

The Z-shaped steel sheet pile according to Claim 1 or 2, wherein the protrusions provided on both sides of the center of the web portion are equidistant from the center of the web portion.

[Claim 4]

The Z-shaped steel sheet pile according to any one of Claims 1 to 3, wherein the protrusion provided on the web portion protrudes in a direction parallel to outer surface of the flange portion.

[Claim 5]

The Z-shaped steel sheet pile according to any one of Claims 1 to 4, wherein an angle at which the protrusion is attached falls within a range of 45° to 135°.

[Claim 6]

The Z-shaped steel sheet pile according to any one of Claims 1 to 5, wherein the protrusion has a height of 50 mm or larger.