CLAIMS

1. A duplex stainless steel welded joint, comprising:

a base metal consisting of, in mass%,

C: 0.001% to 0.030%,

Si: 0.05% to 0.80%,

Mn: 0.05% to 1.20%,

P: 0.030% or less,

S: 0.0030% or less,

Cr: 21.00% to 28.00%,

Ni: 4.00% to 8.00%,

Mo: 2.00% to 4.50%,

Cu: 0.01 to 4.00%,

sol. Al: 0.0010 to 0.0500%,

N: 0.080% to 0.400%,

B: 0.0001 to 0.0100%,

W: 0 to 4.00%,

Nb: 0 to 0.10%,

V: 0 to 0.20%,

Ta: 0 to 0.30%,

Co: 0 to 1.00%,

Sn: 0 to 0.020%,

Mg: 0 to 0.0200%, and

Ca: 0 to 0.0100%,

with the balance being Fe and impurities;

and

a weld metal consisting of, in mass%,

C: 0.001% to 0.030%,

Si: 0.05% to 0.70%,

Mn: 0.05% to 0.85%,

P: 0.030% or less,

S: 0.0030% or less,

Cr: 21.00% to 28.00%,

Ni: 5.00% to 11.00%,

Mo: 2.00% to 4.50%,

Cu: 0.01 to 4.00%,

sol. Al: 0.0010 to 0.0500%,

N: 0.080% to 0.400%,

B: 0.0001 to 0.0100%,

W: 0 to 4.00%,

Nb: 0 to 0.10%,

V: 0 to 0.20%,

Ta: 0 to 0.30%,

Co: 0 to 1.00%,

Sn: 0 to 0.020%,

Mg: 0 to 0.0200%, and

Ca: 0 to 0.0100%,

with the balance being Fe and impurities;

wherein:

a content of each element in the base metal and the weld metal is satisfied, and Formula (1) and Formula (2) are satisfied:

$Si+3Mn \leq 3.00$ (1)

$0 < BH/BW < 0.15$ (2)

where, a content of a corresponding element in the weld metal is substituted in percent by mass for each symbol of an element in Formula (1), and

where, in Formula (2), a cap height (mm), which refers to the maximum height of the weld metal in a case where a surface of the base metal is taken as a reference, is substituted for BH, and a cap width (mm), which refers to the width of the weld metal at the surfaces of the base metal in a perpendicular direction to an extending direction of the weld metal, is substituted for BW.

2. The duplex stainless steel welded joint according to claim 1, wherein:

in a case where a thickness of the base metal is 2.5 mm or less, Formula (3) and Formula (4) are also satisfied:

$Si+4Mn \leq 3.75$ (3)

$0 < BH/BW \leq 0.5/(6.0-0.85WT)$ (4)

where, a content of a corresponding element in the weld metal is substituted in percent by mass for each symbol of an element in Formula (3), and

where, in Formula (4), a cap height (mm) of the weld metal is substituted for BH, a cap width (mm) of the weld metal is substituted for BW, and a thickness (mm) of the base metal is substituted for WT.

3. The duplex stainless steel welded joint according to claim 1 or claim 2, wherein the base metal contains one or more elements selected from a group consisting of, in mass%:

W: 0.01 to 4.00%,
Nb: 0.01 to 0.10%,
V: 0.01 to 0.20%,
Ta: 0.01 to 0.30%,
Co: 0.01 to 1.00%,
Sn: 0.001 to 0.020%,
Mg: 0.0001 to 0.0200%, and
Ca: 0.0001 to 0.0100%.

4. The duplex stainless steel welded joint according to any one of claims 1 to 3, wherein the weld metal contains one or more elements selected from a group consisting of, in mass%:

W: 0.01 to 4.00%,
Nb: 0.01 to 0.10%,
V: 0.01 to 0.20%,
Ta: 0.01 to 0.30%,
Co: 0.01 to 1.00%,
Sn: 0.001 to 0.020%,
Mg: 0.0001 to 0.0200%, and
Ca: 0.0001 to 0.0100%.