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Nails

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Wire Products Association (JWPA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS A 5508** : 2005 is replaced with this Standard.

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Nails

1 Scope

This Japanese Industrial Standard specifies the nails used for general purpose. However, the materials and methods for connection of nails to be used by automatic nailing machine are not specified here.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 7502 *Micrometer callipers*

JIS B 7503 *Dial gauges*

JIS B 7507 *Vernier, dial and digital callipers*

JIS G 3532 *Low carbon steel wires*

JIS G 4309 *Stainless steel wires*

JIS H 8610 *Electroplated coatings of zinc on iron or steel*

JIS H 8641 *Hot dip galvanized coatings*

3 Classification and symbol

The classification of nails shall be as shown in table 1. In addition, the nails shall be classified according to the shape of head and shank as shown in table 2 and table 3.

Table 1 Classification and symbol of nails

Classification	Material	Symbol of classification
Low carbon steel wire nail	Low carbon steel	N
Plated low carbon steel wire nail	Low carbon steel	NZ
Thick low carbon steel wire nail	Low carbon steel	CN
Plated thick low carbon steel wire nail	Low carbon steel	CNZ
Hot dip galvanized coatings thick low carbon steel wire nail	Low carbon steel	ZN
Thin low carbon steel wire nail	Low carbon steel	BN
Stainless steel nail	Stainless steel	S
Nail for plasterboard	Low carbon steel	GN
	Stainless steel	GNS
Nail for sheething board	Low carbon steel	SN
Nail for PN	Low carbon steel	PN
	Stainless steel	PNS

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Table 2 Classification according to the shape of head

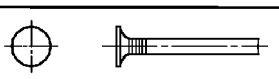
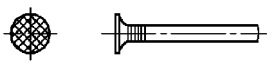
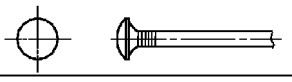
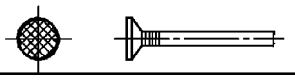
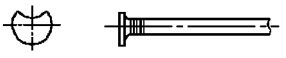
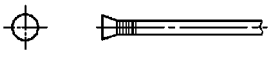
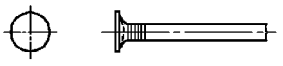
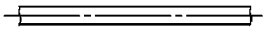
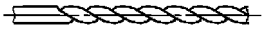
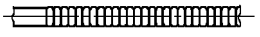
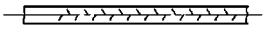
Shape of head	Symbol	Shape
Flat head	F	
Flat head with checkers	FC	
Round head	O	
Counersunk head with checkers	DC	
Half round head	H	
Deformed head	M	
Casing head	K	
Cup head	C	

Table 3 Classification according to the shape of shank

Shape of shank	Symbol	Shape
Smooth	SM	
Screw	SR	
Ring	R	
Barb	B	

4 Quality

4.1 Appearance

The appearance of nail shall be as follows :

a) The head shall be that the upper surface (lower surface in the case of round head) is perpendicular to the centre line of shank and has no noticeable eccentricity. Further, punch marks may can be stamped on the top of nails for the discrimination.

b) The shank shall be that the surface is free from noticeable flaws, burrs, etc. In the case of smooth shank, it shall be smooth.

4.2 Bend of shank

The bend of nail shank shall be 1 % or less of length L (see table 4 to table 13).

4.3 Surface treatment

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For plated low carbon steel wire nails, plated thick low carbon steel wire nails, nails for plasterboard (GN) and nails for sheathing board, electroplated coatings of zinc of Grade 1, Grade 2 or Grade 3 specified in **JIS H 8610** or an anticorrosive surface treatment equivalent or superior thereto shall be performed. For hot dip galvanized coatings thick low carbon steel wire nails, hot dip galvanized coating of Class 1A specified in **JIS H 8641** or at least the equivalent anticorrosive surface treatment shall be performed.

5 Shape

The shape of nails shall be in accordance with table 2 as for the head shape, table 3 as for nail shank shape, and table 4 to table 13 as for point shape.

6 Dimension and tolerance

The dimension and tolerance of nails shall be as given in tables 4 to 13.

7 Material

7.1 Low carbon steel wire

The low carbon steel wire shall be of the quality equivalent or superior to low carbon steel wire for nail manufacturing specified in **JIS G 3532**. As for the nail for plasterboard and the nail for sheathing board, those of the quality equivalent or superior to the ordinary low carbon steel wire specified in **JIS G 3532** may be used.

7.2 Stainless steel wire

The stainless steel wire shall be of the quality equivalent or superior to SUS304 specified in **JIS G 4309**.

8 Test

8.1 Appearance and shape

The appearance and shape of nail shall be tested visually.

8.2 Bend of shank

The bend of shank of the nail shall be tested in such manner that the part except for the point and the gripper marks of neck is measured using a measuring instrument with the precision of 0.01 mm or more precise or a suitable limit gauge as shown in figure 1. That which the shank is formed with screw or ring shall be performed after shank forming.

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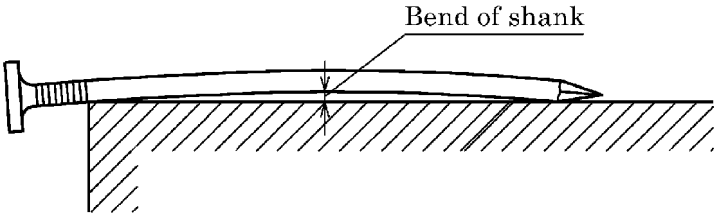


Figure 1 Bend of shank

8.3 Surface treatment

The surface treatment test for the electroplated coating of zinc shall be carried out in accordance with **JIS H 8610**.

The surface treatment test for hot dip galvanizing shall be carried out in accordance with the copper sulfate test specified in **JIS H 8641**.

8.4 Dimension

The measurement of dimensions of nails shall be carried out on each part of nails by means of the measuring devices specified in **JIS B 7502**, **JIS B 7503** or **JIS B 7507** or the devices having the precision equivalent or superior thereto.

9 Inspection

The inspection of nails shall be performed on quality, shape, dimensions, tolerances and materials by using the reasonable sampling inspection method and the results shall conform to the requirements in clauses 4 to 6.

10 Designation of product

The designation of product of nail shall be in the following order.

a) Classification symbol

b) Symbol that shows classification according to shape of head

This may be omitted in other case than stainless steel nails and nails for plasterboard or PN.

c) Symbol that shows classification according to shape of shank

This may be omitted in the case of smooth shank and the case of nails for sheathing board and nails for PN of casing head.

d) Diameter of shank

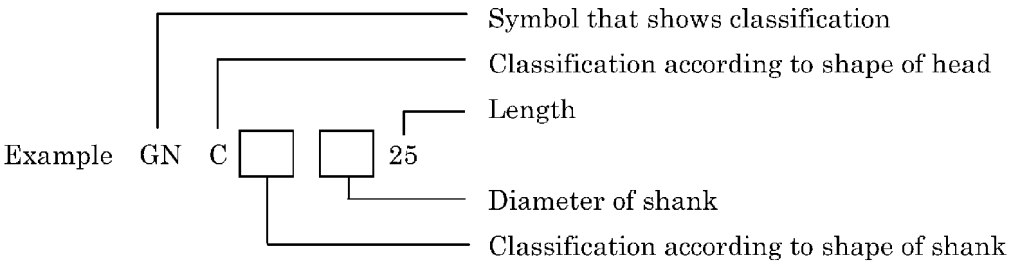
This may be omitted in other case than the nail for PN.

e) Length

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11 Marking

The product shall be marked with the following items on the outside of every package by suitable method.

a) Classification and designation [1]. However, the nail designation referencing to the head diameter of low carbon steel wire nail N90 or plated low carbon steel wire nail NZ90 shall be "N90 : 2005" or "NZ90 : 2005".

b) Grade of electroplated coating of zinc, type of hot dip galvanized coating or the detail of equivalent or better rust preventing method.

c) Year and month of manufacture or their abbreviation

d) Manufacturer's name or its abbreviation

Note [1] It means the designation from table 4 to table 13.

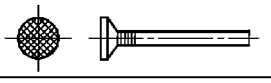
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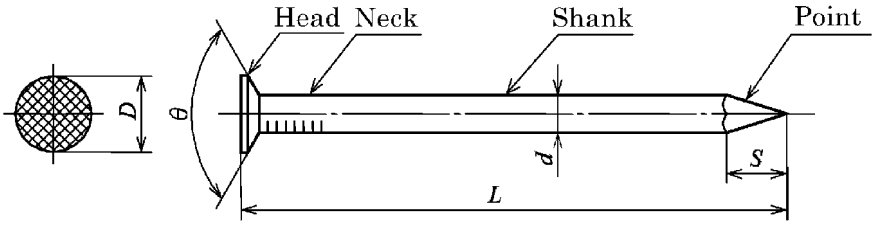
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Table 4 Low carbon steel wire nail

a) Shape of low carbon steel wire nail

Shape of head	Countersunk head with checkers and point 
Shape of shank and point	Smooth 

b) Dimension of low carbon steel wire nail



Unit : mm

Nominal size	Length L		Diameter of shank d		Length of point S	Diameter of head D		Head angle θ (informative)
	Dimension	Tolerance	Dimension	Tolerance		Dimension	Tolerance	
N 19	19	± 1.0	1.50	± 0.05	1.2 or over to and excl. 3.0	3.6	± 0.36	120°
N 22	22	± 1.5						
N 25	25		1.70		1.4 or over to and excl. 3.4	4.0	± 0.40	
N 32	32	± 2.0	1.90		1.5 or over to and excl. 3.8	4.5	± 0.45	
N 38	38		2.15	± 0.06	1.7 or over to and excl. 4.3	5.1	± 0.51	
N 45	45	± 2.5	2.45		2.0 or over to and excl. 4.9	5.8	± 0.58	
N 50	50		2.75		2.2 or over to and excl. 5.5	6.6	± 0.66	
N 65	65	± 3.0	3.05	± 0.08	2.4 or over to and excl. 6.1	7.3	± 0.73	
N 75	75	± 3.5	3.40		2.7 or over to and excl. 6.8	7.9	± 0.79	
N 90 [a)]	90	± 4.0	3.75		3.0 or over to and excl. 7.5	8.8	± 0.88	
N 100	100	± 4.5	4.20	± 0.10	3.4 or over to and excl. 8.4	9.8	± 0.98	
N 115	115	± 5.0						
N 125	125		4.60		3.7 or over to and excl. 9.2	10.3	± 1.03	
N 150	150		5.20		4.2 or over to and excl. 10.4	11.5	± 1.15	

Note [a)] The head diameter of N90 may be reference till March 31, 2012. In this case, the designation shall be "N90 : 2005".

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