



National Standard of the People's Republic of China

GB/T 42916—2023

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Identification marking of  
aluminium and aluminium alloy products

**铝及铝合金产品标识**

(English Translation)

(送审稿)

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## Foreword

SAC/TC 243 is in charge of this English translation. In case of any doubt about the contents of English translation, the Chinese original shall be considered authoritative.

This standard is drafted in accordance with the rules given in the GB / T 1.1 2020 *Directives for standardization – Part 1: Structure and drafting of standards*.

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. The issuing body of this document shall not be held responsible for identifying any or all such patent rights.

This standard was proposed by China Nonferrous Metals Industry Association.

This standard was prepared by SAC/TC 243 National Technical Committee for Standardization of Nonferrous Metals.

# Identification marking of aluminium and aluminium alloy products

## 1 Scope

This document specifies identification marking of aluminium and aluminium alloy products, including marking classification, general requirements, ingot marking, sheet/plate marking, strip and foil marking, tube marking, rod/bar marking, profile marking, wire marking and forging marking.

This document is applicable to identification marking of aluminium and aluminium alloy ingot, sheet/plate, strip, foil, tube, rod/bar, profile, wire and forging.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 8005.1 *Aluminium and aluminium alloys – Terms and definitions – Part 1: Product and method of processing and treatment*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 8005.1 and the following apply.

### 3.1 spot marking

identification marking of one set of information which is marked at specific or appropriate location of product

### 3.2 continuous marking

identification marking of one set of information which is recurrently marked in fixed intervals on product surface

Note: Generally use ink jet marking.

### 3.3 perimeter marking

continuous marking (3.2) which is marked adjacent to the four edges of the product

Note: Generally use ink jet marking.

### 3.4 nick marking

identification marking by means of steel impression marking, pneumatic marking or laser marking at end part surface or bottom cross section of the product

Note: Generally use spot marking (3.1).

### 3.5 ink jet marking

identification marking by means of ink jet printer at specified location of the product

Note: Generally use spot marking (3.1), continuous marking (3.2) or perimeter marking (3.3).

### 3.6 label mark

identification marking by means of labeling or hanging sign at end part or specified location of the product

Note: Generally use spot marking (3.1)

### 3.7 information marking

identification marking by means of nick marking (3.4), ink jet marking (3.5) or label mark (3.6) after information-based coding the product information

## 4 Marking classification

Marking method, classification and example, see Table 1.

Table 1 Marking method, classification and example

Marking method		Marking classification	Marking example
Nick marking	Steel impression marking	Spot marking	See Figure A.1 in Annex 1
	Pneumatic marking		See Figure A.2
	Laser marking		See Figure A.3
Ink jet marking		Spot marking Continuous marking Perimeter marking	See Figure A.4
Label mark	Hanging sign	Spot marking	See Figure A.5
	Labeling	Spot marking	See Figure A.6
Combination marking	Combination A: nick marking + ink jet marking	—	See Figure A.7

	Combination B: nick marking + label mark		See Figure A. 8
	Combination C: ink jet marking + label mark		See Figure A. 9

## 5 General requirements

5.1 Identification marking of product shall conform to the product standard or the order (or contract). When there is no specification in the product standard, it shall conform to this document.

5.2 Identification marking of product shall be accurate. The lot of products with inaccurate information shall be deemed as unqualified. The standard information sequence should conform to the requirements specified in this document. The aluminium alloy product for aerospace with inaccurate information sequence shall be modified by the supplier or used after negotiation between the supplier and the purchaser.

5.3 Identification marking of product shall be legible and shall not be rubbed off or obliterated by contact arising from normal handling, exposure, shipping or storage. Product marking shall be identifiable before use.

5.4 The font size shall be visible for the identification marking of product. The font/font size shall be indicated in the order (or contract) if required by the purchaser.

5.5 Identification marking of product shall not be detrimental to subsequent processing or product quality of available part.

5.6 One or more method or combination might (may?) be used for the identification marking of product according to product characteristics.

5.7 When the label mark might be covered by a certificate, the certificate shall be pasted on the specified location of the product instead of label mark as specified in this document.

5.8 When continuous marking is used, the information at head end or tail end is allowed to be incomplete due to sawing, length or other factors, but there shall be at least one marking containing a complete set of information.

5.9 When the supply is interrupted, the products produced thereafter shall be marked at the same location corresponding to that of the product before interruption. The identification marking shall include ingot piece number or product piece number involved.

5.10 If it is required to distinguish the head, tail or certain location of the product, coloring or painting might be adopted. The color shall be determined through negotiation between the supplier and the purchaser and indicated in the order (or

contract). Unless otherwise specified, the head shall be painted yellow and the tail shall be painted green. See Figure A.10.

5.11 The coding method for information marking should be QR code as specified in GB/T 21049.

## 6 Ingot marking

### 6.1 Marking selection

Nick marking should be used for the ingot, ink jet marking, label mark and combined marking may also be used. The ingot marking of aluminium and aluminium alloy for aerospace shall conform to B.1.

### 6.2 Marking information

Marking information for ingot/billet shall conform to Table 2.

Table 2 Marking information for ingot/billet

Marking item	Marking information <sup>a</sup>		
	Nick marking	Ink jet marking	Label mark
Designation	Shall be marked.		
Temper (O <sub>3</sub> for the homogenized ingot and no marking for the as-cast ingot)			
Dimension			
Product standard number	Shall be marked (if required).	Shall be marked.	
Cast number	Shall be marked.		
Piece number	Shall be marked (if required).		
Weight	Shall not be marked.	Shall be marked (if required).	
Heat number			
Manufacturer's name (or code)	Shall be marked (if required).	Shall be marked.	

Inspection stamp of supplier's technical supervision department	Shall be marked.	
Supplier address	Shall not be marked.	Shall be marked (if required).
Supplier contact information		
Production date		
Packaging date		
*The information marking shall conform to the requirements of label mark.		

### 6.3 Marking rules

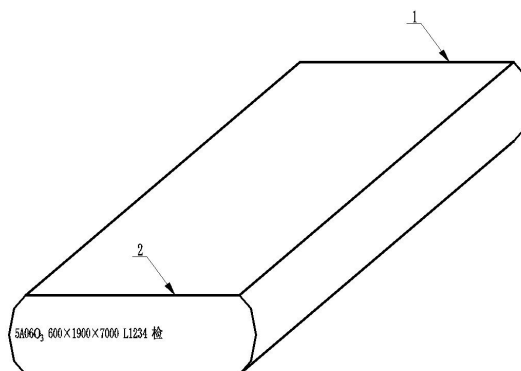
#### 6.3.1 Rectangular ingots

##### 6.3.1.1 Nick marking

Nick marking shall be used on the surface along width direction of the rectangular ingot tail in the order of designation, temper (with O<sub>3</sub> for the homogenized ingot and no marking for the as-cast ingot), dimension, product standard number (if required), cast number, piece number (if required), manufacturer's name (or code) (if required) and the inspection stamp of the supplier's technical supervision department. The marking information might be expressed in one row or two rows.

Example 1:

The schematic diagram of nick marking, which contains such information as designation 5A06, homogenizing temper, 600mm (thickness) × 1900mm (width) × 7000mm (length), cast number L1234, and the inspection stamp of the supplier's technical supervision department as "检", is shown in Figure 1 as one row.



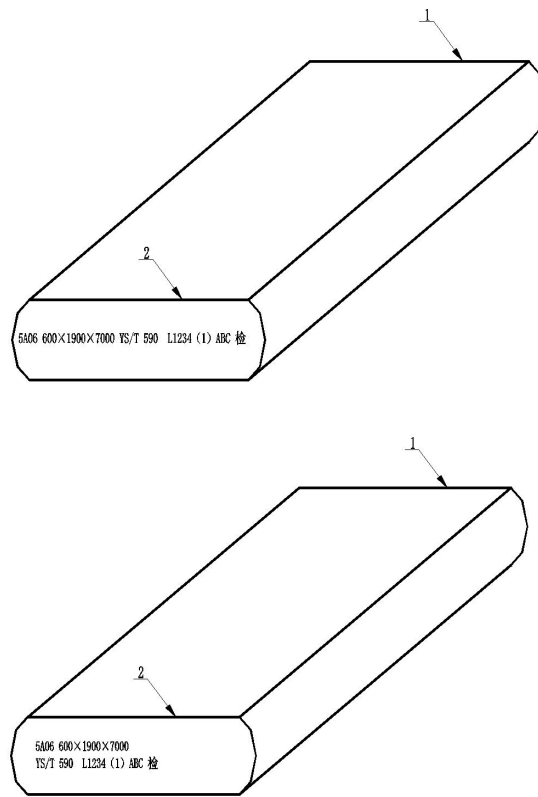
Keys:

- 1 Rectangular ingot head (ingot gate) after head and tail cutting;
- 2 Ingot tail (dummy ingot head) after head and tail cutting.

Figure 1 Schematic diagram of nick marking on rectangular ingot (1)

Example 2:

The schematic diagram of nick marking, which contains such information as designation 5A06, as-cast temper, 600mm (thickness) × 1900mm (width) × 7000mm (length), product standard number YS/T 590, cast number L1234, piece number 1, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "检", is shown in Figure 2a) as one row and Figure 2b) as two rows.



a) one-row information marking      b) two-row information marking

Keys:

- 1 Ingot head (ingot gate) after head and tail cutting;
- 2 Ingot tail (dummy ingot head) after head and tail cutting.

Figure 2 Schematic diagram of nick marking on rectangular ingot (2)

### 6.3.1.2 Ink jet marking

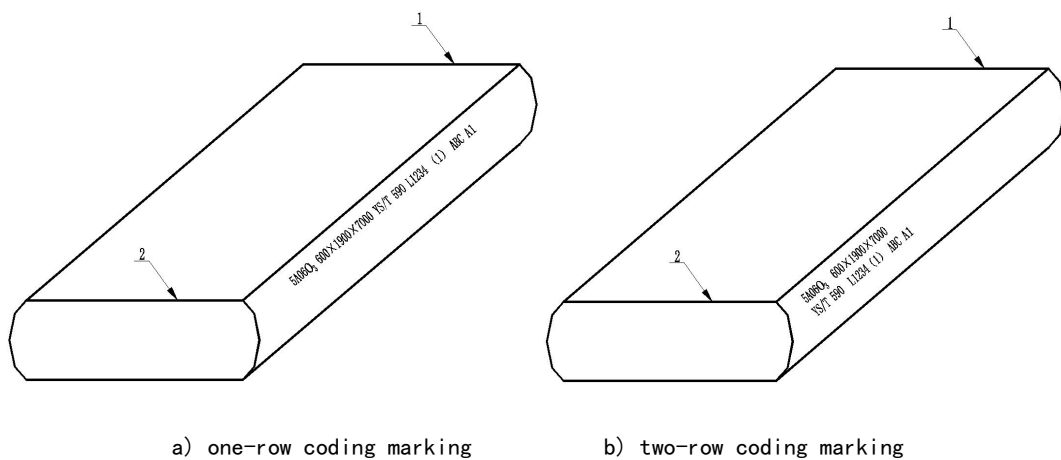
Ink jet marking shall be used on the surface along height direction of the side of the rectangular ingot in the order of designation, temper (with O<sub>3</sub> for the homogenized



ingot and no marking for the as-cast ingot), dimension, product standard number (if required), cast number, piece number (if required), manufacturer's name (or code) (if required) and the inspection stamp of the supplier's technical supervision department. The marking information might be expressed in a one row or two rows spot marking.

Example 1:

The schematic diagram of ink jet marking, which contains such information as designation 5A06, homogenizing temper, 600mm (thickness) × 1900mm (width) × 7000mm (length), product standard number YS/T 590, cast number L1234, piece number 1, manufacturer's name (or code) ABC and the inspection stamp of the supplier's technical supervision department as "A1", is shown in Figure 3.



Keys:

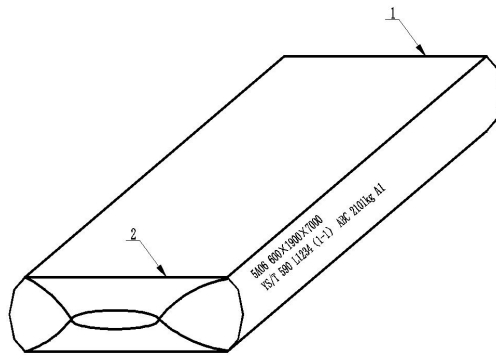
1 Ingot head (ingot gate) after head and tail cutting

2 Ingot tail (dummy ingot head) after head and tail cutting

Figure 3 Schematic diagram of ink jet marking on ingot (1)

Example 2:

The schematic diagram of ink jet marking, which contains such information as designation 5A06, homogenizing temper, 600mm (thickness) × 1900mm (width) × 7000mm (length), product standard number YS/T 590, cast number L1234, piece number 1-1, manufacturer's name (or code) ABC, weight 2101kg, and the inspection stamp of the supplier's technical supervision department as "A1", is shown in Figure 4.



Keys:

1 Ingot head (ingot gate) before head and tail cutting

2 Ingot tail (dummy ingot head) before head and tail cutting

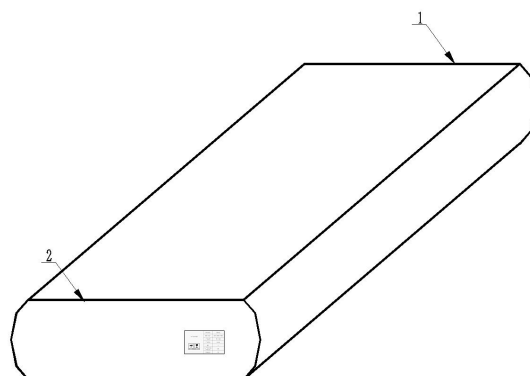
Figure 4 Schematic diagram of ink jet marking on ingot (2)

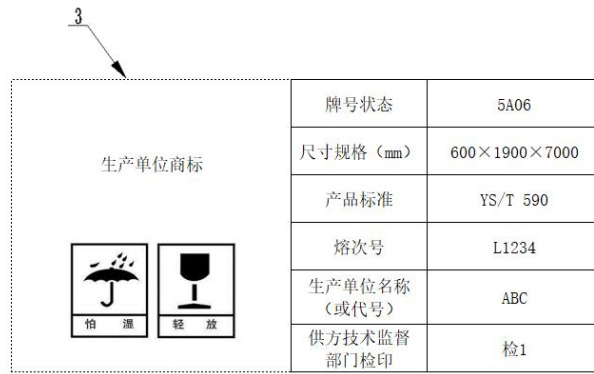
### 6.3.1.3 Label mark

Label mark shall be pasted on the end surface along width direction of the ingot tail, including designation, temper (with  $O_3$  for the homogenized ingot and no marking for the as-cast ingot), dimension, product standard number, cast number, manufacturer's name (or code), the inspection stamp of the supplier's technical supervision department, and might also include any other information required by the purchaser.

Example 1:

The schematic diagram of label mark, which contains such information as designation 5A06, as-cast temper, 600mm (thickness) × 1900mm (width) × 7000mm (length), product standard number YS/T 590, cast number L1234, manufacturer's name (or code) ABC, the inspection stamp of the supplier's technical supervision department as "Inspection 1", is shown in Figure 5.





a) labeling

b) label information

Figure 5 b) 表格		
Trademark of manufacturer	Designation and temper	5A06
	Dimension (mm)	600×1900×700
	Product standard	YS/T 590
No moisture! Handle with care!	Cast number	L1234
	Manufacturer's name (or code)	ABC
	The inspection stamp of the supplier's technical supervision department	Inspection 1

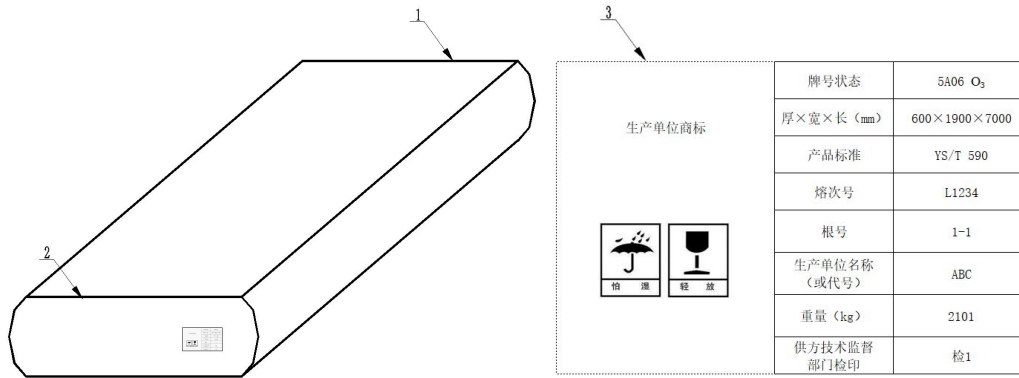
Keys:

- 1 Ingot head (ingot gate) after head and tail cutting;
- 2 Ingot tail (dummy ingot head) after head and tail cutting;
- 3 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 5 Schematic diagram of labeling on ingot (1)

Example 2:

The schematic diagram of label mark, which contains such information as designation 5A06, homogenizing temper, 600mm (thickness) × 1900mm (width) × 7000mm (length), product standard number YS/T 590, cast number L1234, piece number 1-1, manufacturer's name (or code) ABC, 2102kg (weight), the inspection stamp of the supplier's technical supervision department as "Inspection 1", is shown in Figure 6.



a) labeling                      b) label information

Figure 6 b) 表格				
Trademark of manufacturer	Designation and temper		5A06 O <sub>3</sub>	
	Thickness × Width × Length (mm)		600×1900×700	
	Product standard		YS/T 590	
No moisture!	Handle with care!	Cast number		L1234
		Piece number		1-1
		Manufacturer's name (or code)		ABC
		Weight (kg)		2101
		The inspection stamp of the supplier's technical supervision department		Inspection 1

Keys:

- 1 Ingot head (ingot gate) after head and tail cutting;
- 2 Ingot tail (dummy ingot head) after head and tail cutting.
- 3 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 6 Schematic diagram of labeling on ingot (2)

6.3.1.4 Information marking

6.3.1.4.1 Information marking on ingot shall contain designation, temper (with O<sub>3</sub> for the homogenized ingot and no marking for the as-cast ingot), dimension, product standard number, cast number, manufacturer's name or code, the inspection stamp of the supplier's technical supervision department, and might also include any other information required by the purchaser.

6.3.1.4.2 Information marking might be used by labeling or ink jet printing, and it should be used in conjunction with label mark.




Example:

The schematic diagram of label mark, which contains such information as designation 5A06,

homogenizing temper, 600mm (thickness) × 1900mm (width) × 7000mm (length), product standard number YS/T 590, cast number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 7 as information marking and Figure 8 as combination marking of information marking and label mark.



Figure 7 Schematic diagram of informaiton marking (QR code)

生产单位商标   怕 湿  轻 放	牌号状态	5A06
	尺寸规格 (mm)	600×1900×7000
	产品标准	YS/T 590
	熔次号	L1234
	生产单位名称 (或代号)	ABC
	供方技术监督 部门检印	检1

Trademark of manufacturer	Designation and temper		5A06
	Dimension (mm)		600×1900×700
	Product standard		YS/T 590
No moisture! Handle with care!	Cast number		L1234
	Manufacturer's name (or code)		ABC
	The inspection stamp of the supplier's technical supervision department		检 1

Figure 8 Schematic diagram of combination marking of information marking and label mark

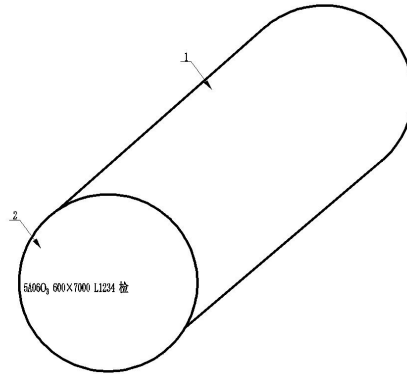
### 6.3.2 Billet

#### 6.3.2.1 Nick marking

Nick marking shall be used on the surface of the billet tail in the order of designation, temper (with O<sub>3</sub> for the homogenized billet and no marking for the as-cast billet), dimension, product standard number (if required), cast number, piece number (if required), manufacturer's name(or code) (if required) and the inspection stamp of the supplier's technical supervision department. The marking information might be expressed in one row or two rows.

Example 1:

The schematic diagram of nick marking, which contains such information as designation 5A06, homogenizing temper, 600mm (diameter) × 7000mm (length), cast number L1234, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 9 as one row.



Keys:

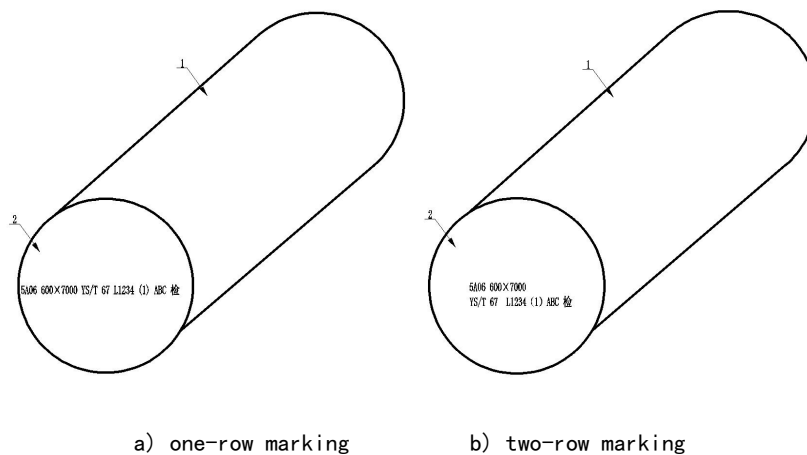
1 Billet surface;

2 Billet tail (dummy billet head) after head and tail cutting.

Figure 9 Schematic diagram of nick marking on billet (1)

Example 2:

The schematic diagram of nick marking, which contains such information as designation 5A06, homogenizing temper, 600mm (diameter) × 7000mm (length), product standard number YS/T 67, cast number L1234, piece number 1, manufacturer's name (or code) ABC, the inspection stamp of the supplier's technical supervision department as "inspection", is shown in Figure 10a) as one row and Figure 10b) as two rows.



a) one-row marking

b) two-row marking

Keys:

1 Billet surface;

2 Billet tail (dummy billet head) after head and tail cutting.

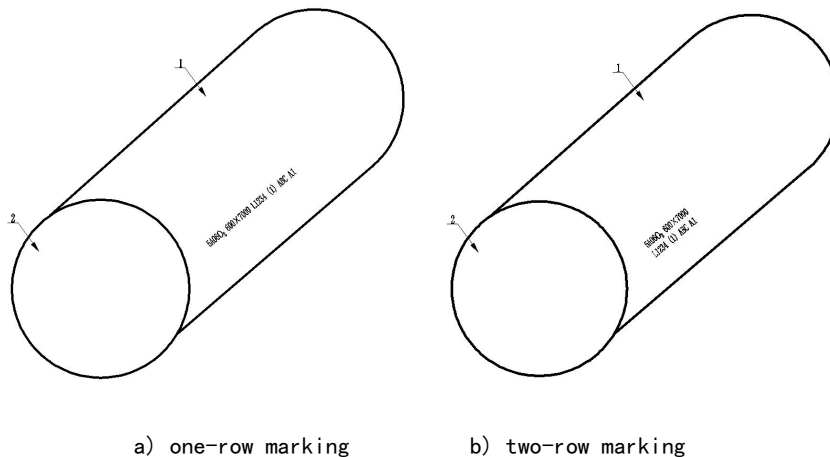
Figure 10 Schematic diagram of nick marking on billet (2)

## 6.3.2.2 Ink jet marking

Ink jet marking shall be used on the billet surface in the order of designation, temper (with  $O_3$  for the homogenized billet and no marking for the as-cast billet), dimension, product standard number (if required), cast number, piece number (if required), manufacturer's name (or code), weight (if required) and the inspection stamp by the supplier's technical supervision department. The one-row or two-row spot ink jet marking is available.

Example 1:

The schematic diagram of ink jet marking, which contains such information as designation 5A06, 600mm (diameter)  $\times$  7000mm (length), cast number L1234, piece number 1, manufacturer's name (or code) ABC, the inspection stamp of the supplier's technical supervision department as "A1", is shown in Figure 11.



Keys:

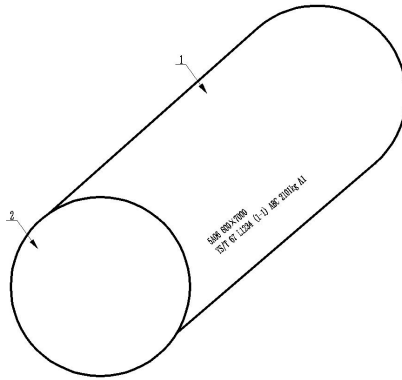
1 Billet surface;

2 Billet tail (dummy billet head) after head and tail cutting.

Figure 11 Schematic diagram of ink jet marking on billet (1)

Example 2:

The schematic diagram of ink jet marking, which contains such information as designation 5A06, 600mm (diameter)  $\times$  7000mm (length), product standard number YS/T 67, cast number L1234, piece number 1-1, manufacturer's name (or code) ABC, 2101kg (weight), the inspection stamp of the supplier's technical supervision department as "A1", is shown in Figure 12.



Keys:

1 Billet surface;

2 Billet tail (dummy billet head) after head and tail cutting.

Figure 12 Schematic diagram of ink jet marking on billet (2)

### 6.3.2.3 Label mark

Labeling shall be used on the end surface of billet tail, including designation, temper (with O<sub>3</sub> for the homogenized billet and no marking for the as-cast billet), dimension, product standard number, cast number, manufacturer's name (or code), the inspection stamp by the supplier's technical supervision department, and might also include any other information required by the purchaser.

Example 1:

The schematic diagram of label mark, which contains such information as designation 5A06, 600mm (diameter) × 7000mm (length), product standard number YS/T 67, cast number L1234, manufacturer's name (or code) ABC, the inspection stamp of the supplier's technical supervision department as "Inspection 1", is shown in Figure 13.

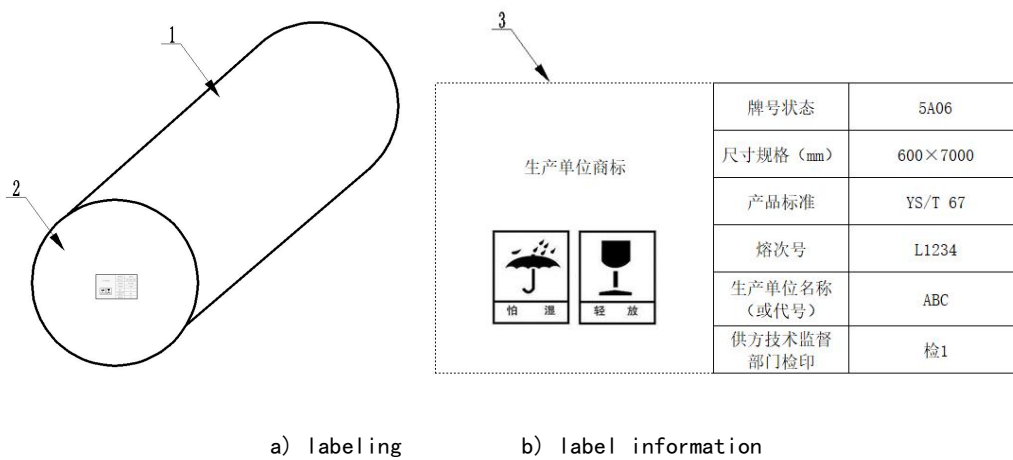


Figure 13b) 表格

Trademark of manufacturer	Designation and temper	5A06
	Dimension (mm)	600×700



		Product standard	YS/T 67
No moisture!	Handle with care!	Cast number	L1234
		Manufacturer's name (or code)	ABC
		The inspection stamp of the supplier's technical supervision department	Inspection 1

Keys:

1 Billet surface;

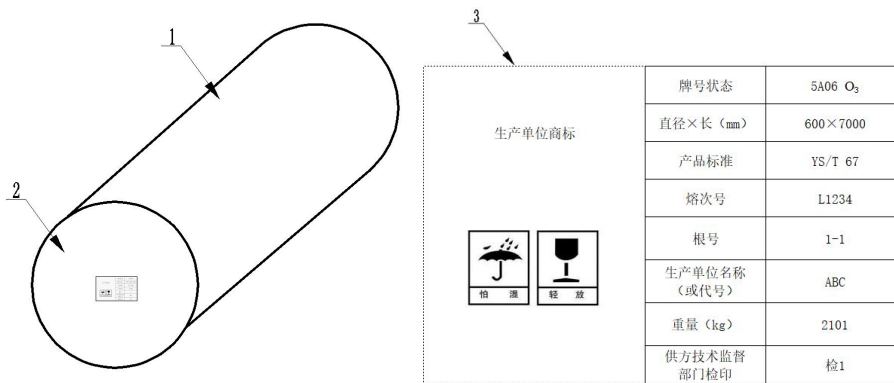
2 Billet tail (dummy billet head) after head and tail cutting.

3 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 13 Schematic diagram of labeling on billet (1)

Example 2:

The schematic diagram of label mark, which contains such information as designation 5A06, homogenizing temper, 600mm (diameter) × 7000mm (length), product standard number YS/T 67, cast number L1234, piece number 1-1, manufacturer's name (or code) ABC, 2101kg (weight), the inspection stamp of the supplier's technical supervision department as "Inspection 1", is shown in Figure 14.



a) labeling

b) label information

		Designation and temper	5A06 O <sub>3</sub>
		Diameter × Length (mm)	600×7000
		Product standard	YS/T 67
No moisture!	Handle with care!	Cast number	L1234
		Piece number	1-1
		Manufacturer's name (or code)	ABC
		Weight (kg)	2101
		The inspection stamp of the supplier's technical supervision department	Inspection 1

Keys:

1 Billet surface;

2 Billet tail (dummy billet head) after head and tail cutting.

3 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 14 Schematic diagram of labeling on billet (2)

#### 6.3.2.4 Information marking

Information marking on billet shall conform to 6.3.1.4.

#### 7 Sheet/plate marking

##### 7.1 Marking selection

7.1.1 Sheet/plate with a thickness of less than 10mm should be used ink jet marking, combination C might be used also. Sheet/plate with a thickness of not less than 10mm should be used nick marking, ink jet marking, label mark and combined marking might be used also.

7.1.2 Spot marking, perimeter marking and continuous marking might be use, when the ink jet marking required by purchaser. If marking method for sheet/plate is not specified in the product standard or the order (or contract), spot marking should be used.

7.1.1 Ink jet marking should be used for sheet/plate less than 10mm in thickness, and combination C may also be used. Nick marking should be used for sheet/plate 10mm and over in thickness, and ink jet marking, label mark and combination marking may also be used.

7.1.2 Spot, perimeter and continuous marking may be used when ink jet marking is not required by the purchaser. Spot marking should be used if marking method is not specified in the product standard or the order (or contract).

7.1.3 Marking of aluminium and aluminium alloy sheet/plate for aerospace shall conform to B.2.

##### 7.2 Marking information

Marking information for sheet/plate shall conform to Table 3.

Table 3 Marking information

Marking information	Marking information <sup>a</sup>		
	Nick marking	Ink jet marking	Label mark

Designation	Shall be marked.			
Temper	Shall be marked.			
Dimension (or pattern code)	Shall be marked only with thickness, and shall be marked with other dimensions as required by the purchaser.	Shall be marked.		
Product standard number	Shall not be marked.			
Lot number	Shall be marked.			
Ship sheet/plate marking code	Shall be marked for ship plate.			
Outboard sheet/plate marking "M"	Shall be marked for ship plate.			
Manufacturer's name (or code)	Shall be marked (if required).	Shall be marked.		
Inspection stamp of supplier's technical supervision department	Shall be marked.	Shall be marked.		
Sheet/plate rolling direction	Shall not be marked.	Shall be marked (if required).	Shall not be marked.	
Sheet/plate piece number		Shall be marked (if required).		
Weight		Shall be marked (if required).		
Melting batch number		Shall be marked (if required).		
Purchaser name		Shall not be marked.	Shall be marked (if required).	
Supplier address			Shall be marked (if required).	

Supplier contact information			
Production date			
Packaging date			
<p><sup>a</sup>The information of information marking shall conform to the requirements of label mark.</p>			

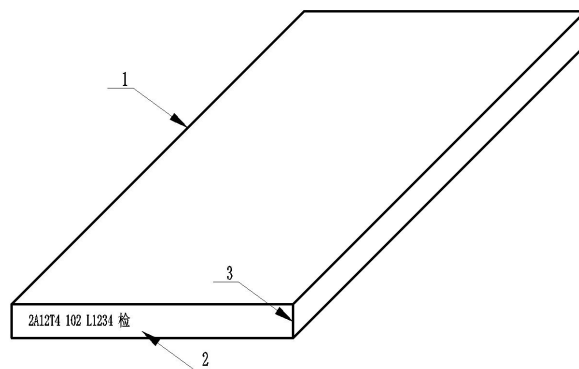
### 7.3 Marking rules

#### 7.3.1 Nick marking

Nick marking shall be used on the end surface of sheet/plate along any width direction in the order of designation, temper, thickness (or pattern code), lot number, manufacturer's name (or code), and the inspection stamp of the supplier's technical supervision department. The marking information can be expressed in one row or two rows.

Example 1:

The schematic diagram of nick marking, which contains such information as designation 2A12, temper T4, 102mm (thickness), lot number L1234 and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 15.



Keys:

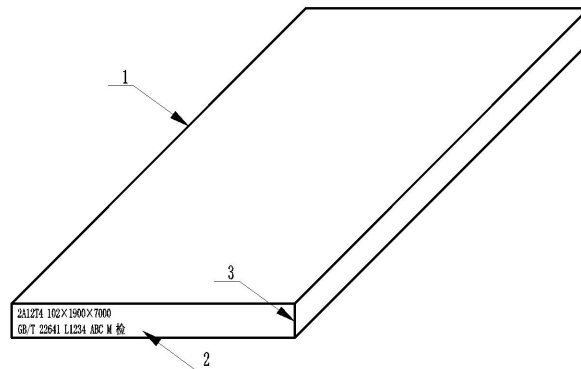
- 1 Rolling direction of sheet/plate;
- 2 Width direction of sheet/plate;
- 3 Height direction of sheet/plate.

Figure 15 Schematic diagram of nick marking on sheet/plate (1)

Example 2:

The schematic diagram of nick marking, which contains such information as designation 2A12, temper T4, 102mm (thickness), "M" identification of outboard plate, product standard number GB/T 22641,

lot number L1234, manufacturer's name (or code) ABC, Certification by China Classification Society and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 16.



Keys:

- 1 Rolling direction of sheet/plate;
- 2 Width direction of sheet/plate;
- 3 Height direction of sheet/plate.

Figure 16 Schematic diagram of nick marking on sheet/plate (2)

### 7.3.2 Ink jet marking

#### 7.3.2.1 Spot ink jet marking

7.3.2.1.1 Spot ink jet marking shall be used along any length or width direction around the rolling surface perimeter in the order of designation, temper, dimension (or pattern code), product standard number, lot number, manufacturer's name (or code), and the inspection stamp of the supplier's technical supervision department. The marking information should be expressed in one row.

7.3.2.1.2 The text of spot ink jet marking of sheet/plate shall be viewed positively from the edge where it locates and parallel to that edge, and the distance between the marking information and the edge of the sheet/plate shall be kept at  $(250 \pm 50)$  mm.

The text of spot ink jet marking of sheet/plate shall be positive as viewed from the edge where it locates and shall be parallel to that edge with a distance of  $(250 \pm 50)$  mm.

Example:

The schematic diagram of spot ink jet marking, which contains such information as designation 2A12, temper T4, 102mm (thickness)  $\times$  1900mm (width)  $\times$  7000mm (length), product standard number GB/T 3880, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 17.

Unit: mm

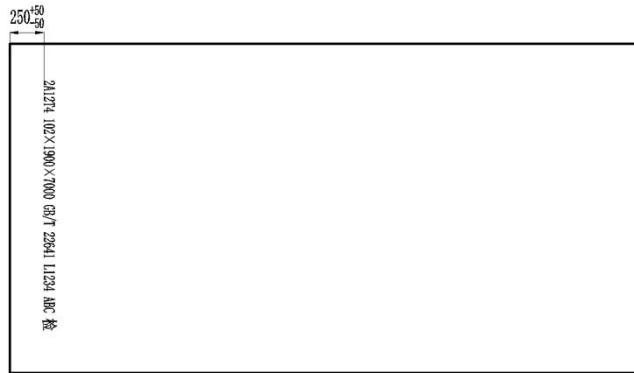


Figure 17 Schematic diagram of spot ink jet marking on sheet/plate

7.3.2.2 Perimeter continuous ink jet marking

7.3.2.2.1 Perimeter continuous ink jet marking shall be used around the rolling surface perimeter in the order of designation, temper, dimension (or pattern code), product standard number, lot number, manufacturer's name (or code), and the inspection stamp of the supplier's technical supervision department. The marking information should be expressed in one row.

7.3.2.2.2 The text of perimeter continuous marking on sheet/plate shall be positive as viewed from the edge where it locates and shall be parallel to that edge. The distance between the marking information and the edge of the sheet/plate shall be  $(250 \pm 50)$  mm , and the distance between each set of information shall be  $(250 \pm 50)$  mm .

Example:

The schematic diagram of perimeter continuous ink jet marking, which contains such information as designation 2A12, temper T4, 102mm (thickness) × 1900mm (width) × 7000mm (length), product standard number GB/T 3880, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 18.

Unit: mm

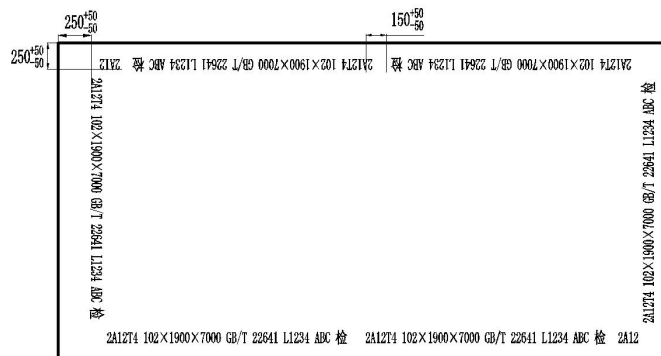


Figure 18 Schematic diagram of perimeter continuous ink jet marking on sheet/plate

7.3.2.3 Whole-surfaced continuous ink jet marking

7.3.2.3.1 Whole-surfaced continuous ink jet marking on sheet/plate shall be used along the rolling direction of the rolling surface in the order of designation, temper, dimension (or pattern code), product standard number, lot number, manufacturer's name (or code), and the inspection stamp of the supplier's technical supervision department. The marking information should be expressed in one row.

7.3.2.3.2 The information shall be marked in the same direction on sheet/plate, i.e. the marking text shall be positive as viewed from the edge where it locates and each line of marking information shall run along the sheet/plate rolling direction.

7.3.2.3.3 Marking shall be parallel to the edge where it locates. The distance between the marking information and the edge of the sheet/plate shall be  $(250 \pm 50)$  mm. The distance between each set of marking information shall be  $(150 \pm 50)$  mm. And the distance between each line of marking information perpendicular to the rolling direction shall be  $(250 \pm 50)$  mm.

Example:

The schematic diagram of whole-surfaced continuous ink jet marking, which contains such information as designation 2A12, temper T4, 102mm (thickness)  $\times$  1900mm (width)  $\times$  7000mm (length), product standard number GB/T 3880, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 19.

Unit: mm

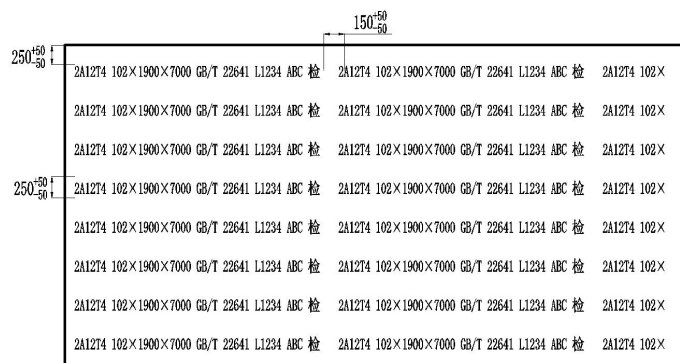


Figure 19 Schematic diagram of continuous ink jet marking on sheet/plate

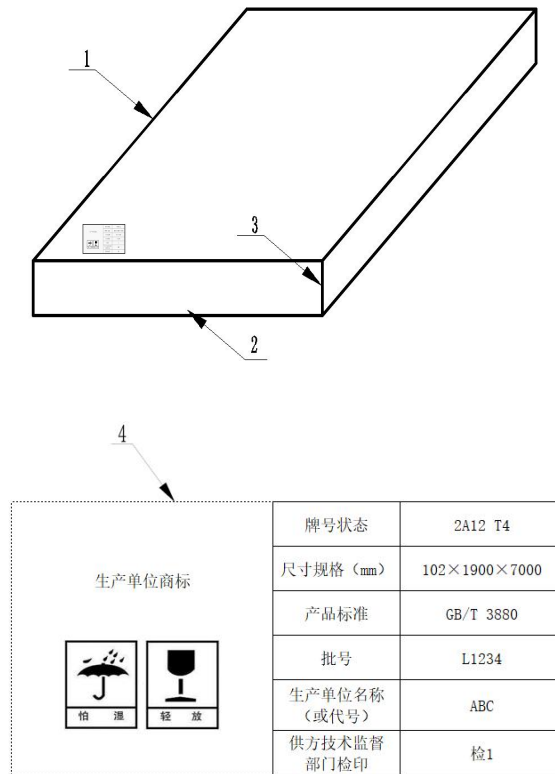
7.3.3 Label mark

Labeling shall be used on the rolling surface near any corner of sheet/plate. For stacked sheet/plate for delivery, labeling shall be used for each of top three pieces. Labeling shall include designation, temper, dimension (or thickness), product standard number, lot number, manufacturer's name (or code), the inspection stamp of the supplier's technical supervision department, and might also include any other

information required by the purchaser.

Example:

The schematic diagram of label mark, which contains such information as designation 2A12, temper T4, 102mm (thickness) × 1900mm (width) × 7000mm (length), product standard number GB/T 3880, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 20.



a) labeling

b) label information

Trademark of manufacturer		Designation and temper	2A12 T4
		Dimension (mm)	102×1900×7000
		Product standard	GB/T 3880
No moisture!	Handle with care!	Lot number	L1234
		Manufacturer's name (or code)	ABC
		The inspection stamp of the supplier's technical supervision department	Inspection 1

Keys:

- 1 Rolling direction of sheet/plate;
- 2 Width direction of sheet/plate;
- 3 Height direction of sheet/plate.



4 – The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 20 Schematic diagram of labeling on sheet/plate

7.3.4 Information marking

The information of the information marking on sheet/plate shall conform to 7.3.3, and the marking method shall conform to 6.3.1.4.2.

8 Strip and foil marking

8.1 Marking selection

Label mark should be used for strip and foil, ink jet marking and combination C may also be used. Spot ink jet marking shall be used for strip and foil.

8.2 Marking information

Marking information for strip/foil shall conform to Table 4.

Table 4 Marking information for strip/foil

Marking information	Marking information <sup>a</sup>	
	Ink jet marking	Label mark
Designation	Shall be marked.	
temper		
Dimension		
Product standard number		
Lot number		
Manufacturer's name (or code)		
Inspection stamp of supplier's technical supervision department		
Coil diameter	Shall be marked (if required).	
Weight		
Melting batch number	Shall not be marked.	Shall be marked (if

Supplier address		required).
Supplier contact information		
Production date		
Packaging date		
<p><sup>a</sup>The information of information marking shall conform to the requirements of label mark.</p>		

8.3 Marking rules

8.3.1 Ink jet marking

Ink jet marking on strip/foil shall be used on the outermost layer of the coil near the end along the width direction in the order of designation, temper, dimension (if the coil diameter is required), product standard number, lot number, manufacturer's name (or code), weight (if required) and the inspection stamp by the supplier's technical supervision department. The marking information can be expressed in one row or two rows.

Example:

The schematic diagram of ink jet marking, which contains such information as designation 3A21, temper H14, 0.6mm (thickness) × 500mm (width), product standard number GB/T 3880, lot number L1234, manufacturer's name (or code) ABC, the inspection stamp of supplier's technical supervision department as "Inspection", is shown in Figure 21.

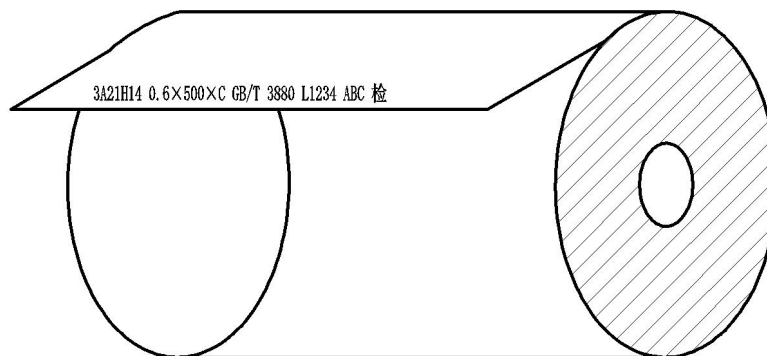


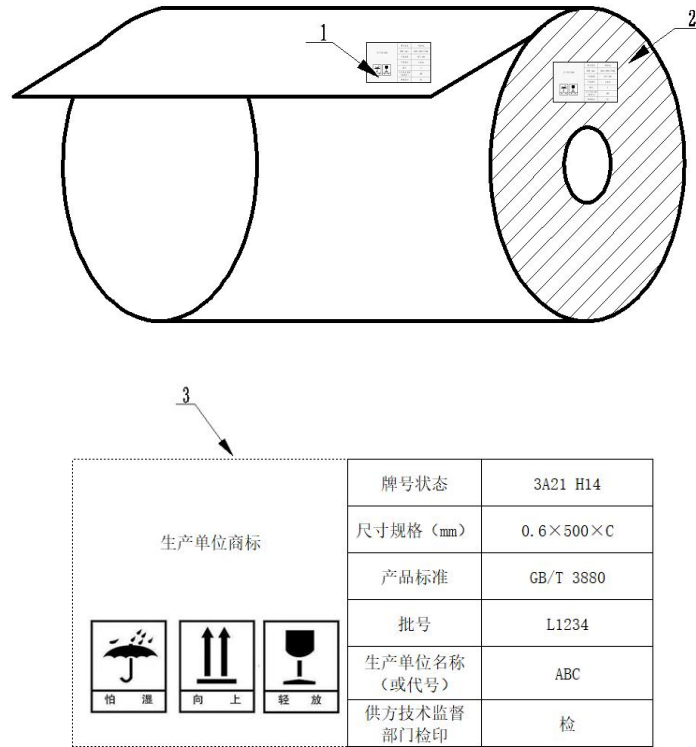
Fig. 21 Schematic diagram of spot marking on strip

8.3.2 Label mark

Labeling on strip/foil shall be located on the outermost layer, the side or the package of the coil, including designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), the inspection stamp of the supplier's technical supervision department, and might also include any other information required by the purchaser.

Example 1:

The schematic diagram of label mark, which contains such information as designation 3A21, temper H14, 0.6mm (thickness) × 500mm (width), product standard number GB/T 3880, lot number L1234, manufacturer's name (or code) ABC, the inspection stamp of supplier's technical supervision department as "Inspection", is shown in Figure 22.



a) labeling

b) label information

Figure 22b) 表格				
Trademark of manufacturer			Designation and temper	3A21 H14
			Dimension (mm)	0.6×500×C
			Product standard	GB/T 3880
No moisture!	This side up	Handle with care!	Lot number	L1234
			Manufacturer's name (or code)	ABC
			The inspection stamp of the supplier's technical supervision department	Inspection

Keys:

1 Label mark on the outermost layer of coil;

2 Label mark on the side of coil;

3 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 22 Schematic diagram of labeling on strip

8.3.3 Information marking

The information of information marking on strip/foil shall conform to 8.3.2, and the marking method shall conform to 6.3.1.4.2.

9 Tube marking

9.1 Marking selection

9.1.1 Label mark should be hung on tube with the wall thickness less than 7mm in and the diameter less than 10mm. For the pipe/tube with the wall thickness less than 7mm and the diameter not less than 10mm, label mark should be hung and ink jet marking or combination C might also be used. For the pipe/tube with the wall thickness not less than 7mm, nick marking should be used and ink jet marking, label mark and combination C might also be used.

9.1.1 Hanging sign should be used for the tube less than 7mm in wall thickness and less than 10mm in diameter. Hanging sign should be used for the tube less than 7mm in wall thickness and 10mm and over in diameter, and ink jet marking or combination C may also be used. Nick marking should be used for the tube 7mm and over in wall thickness, and ink jet marking, label mark and combination C may also be used.

9.1.2 Marking on aluminium and aluminium alloy tube for aerospace shall conform to B.3 in Annex B.

9.2 Marking information

Marking information for tube shall conform to Table 5.

Table 5 Marking information

Marking information	Marking information <sup>a</sup>		
	Nick marking	Ink jet marking	Label mark <sup>b</sup>
Designation	Shall be marked.		
Temper			
Dimension	Shall be marked (if required).	Shall be marked with outside diameter and wall thickness. Shall be marked with fixed length(if required).	Shall be marked.
Product standard number		Shall be marked.	

Lot number	Shall be marked.	
Coating code, color or colour code of pipe / surface-treated tube	Shall be marked for surface-treated tube.	
Manufacturer's name (or code)	Shall be marked (if required).	Shall be marked.
Inspection stamp of supplier's technical supervision department	Shall be marked.	
Weight	Shall not be marked.	Shall be marked (if required).
Heat number		
Supplier address		
Supplier contact information		
Production date		
Packaging date		
<p><sup>a</sup>The information of information marking shall conform to the requirements of label mark.</p> <p><sup>b</sup>When hanging sign is used, the product standard number and manufacturer's name (or code) may not be marked.</p>		

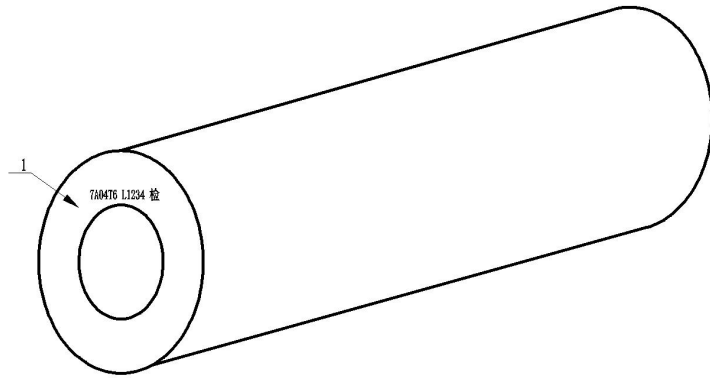
### 9.3 Marking rules

#### 9.3.1 Nick marking

Nick marking shall be used on the wall of the cross section at the end of the tube in the order of designation, temper, dimension (if required), product standard number (if required), lot number, manufacturer's name (or code) (if required) and the inspection stamp by the supplier's technical supervision department. The marking information can be expressed in one row, two rows or three rows.

Example:

The schematic diagram of nick marking on tube, which contains such information as designation 7A04, temper T6, lot number L1234, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 23.



Keys:

1 Tube head, extrusion head for the extruded one and either end for the drawn (rolled) one.

Figure 23 Schematic diagram of nick marking on tube

### 9.3.2 Ink jet marking

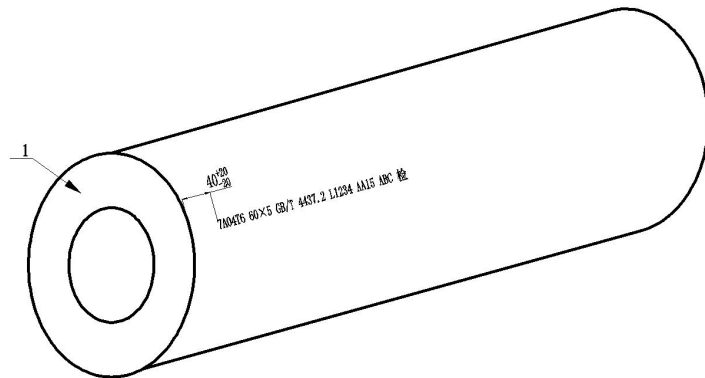
#### 9.3.2.1 Spot ink jet marking

9.3.2.1.1 Spot ink jet marking shall be used on the surface of the tube in the order of designation, temper, dimension, product standard number, lot number, coating code or color or color number of surface-treated tube (if required), manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. The marking information should be expressed in one row.

9.3.2.1.2 Spot ink jet marking shall start  $(40 \pm 20)$  mm from the head and should run along the tube surface as a straight line.

Example:

The schematic diagram of spot ink jet marking, which contains such information as designation 7A04, temper T6, 60mm (outside diameter), 5mm (wall thickness), product standard number GB/T 4437.2, lot number L1234, coating code AA15, manufacturer's name (or code) ABC and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 24.



Keys:

1 Tube head, extrusion head for the extruded one and either end for the drawn (rolled) one.

Figure 24 Schematic diagram of spot ink jet marking on tube

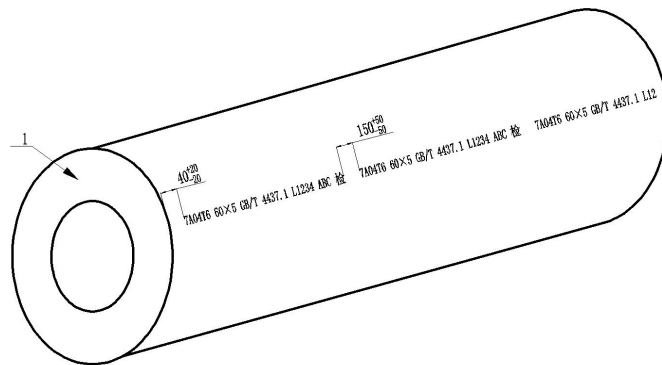
### 9.3.2.2 Continuous ink jet marking

9.3.2.2.1 Continuous ink jet marking shall be used on the surface of tube in the order of designation, temper, dimension, product standard number, lot number, coating code or color or color number of surface-treated tube (if required), manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. The marking information should be expressed in one row.

9.3.2.2.2 Continuous marking shall start  $(40 \pm 20)$  mm from the head, the distance between each set shall be  $(150 \pm 50)$  mm, and should run along the tube surface as a straight line.

Example:

The schematic diagram of continuous ink jet marking, which contains such information as designation 7A04, temper T6, 60mm (outside diameter), 5mm (wall thickness), product standard number GB/T 4437.1, lot number L1234, manufacturer's name (or code) ABC and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 25.



Keys:

1 Tube head, extrusion head for the extruded one and either end for the drawn (rolled) one.

Figure 25 Schematic diagram of continuous ink jet marking on tube

### 9.3.3 Label mark

Labeling or hanging sign shall be used on the outer surface near the head end of tube and labeling shall be used on the outer ring or package of the coil tube, including designation, temper, dimension, product standard number, lot number, coating code or color or color number of surface-treated pipe/tube (if required), manufacturer's name (or code), the inspection stamp of the supplier's technical supervision department, and might also include any other information required by the purchaser.

Example 1:

The schematic diagram of label mark, which contains such information as designation 7A04, temper T6, 60mm (outside diameter), 5mm (wall thickness), 5000mm (specified length), product standard number GB/T 4437.1, lot number L1234, manufacturer's name (or code) ABC and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 26.

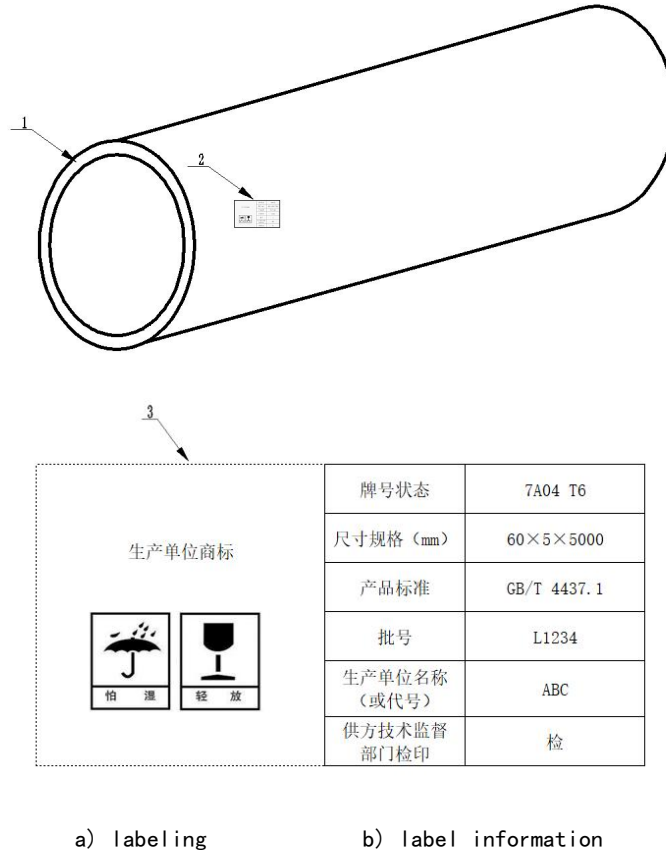


Figure 26b) 表格

Trademark of manufacturer		Designation and temper	7A04 T6
		Dimension (mm)	60×5×5000
		Product standard	GB/T 4437.1
No moisture! Handle with care!	Handle with care!	Lot number	L1234
		Manufacturer's name (or code)	ABC
		The inspection stamp of the supplier's technical supervision department	Inspection 1

Keys:

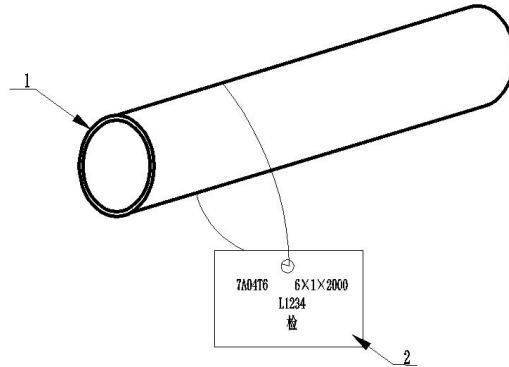
- 1 Tube head, extrusion head for the extruded one and either end for the drawn (rolled) one;
- 2 Schematic diagram of labeling on tube;
- 3 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 26 Schematic diagram of labeling on tube

Example 2:



The schematic diagram of label mark, which contains such information as designation 7A04, temper T6, 6mm (outside diameter), 1mm (wall thickness), 2000mm (specified length), lot number L1234 and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 27.



Keys:

- 1 Tube head, extrusion head for the extruded one and either end for the drawn (rolled) one;
- 2 Schematic diagram of hanging sign on tube.

Figure 27 Schematic diagram of hanging sign on tube

#### 9.3.4 Information marking

The information of information marking shall conform to 9.3.3, and the marking method shall conform to 6.3.1.4.2.

### 10 Rod/bar marking

#### 10.1 Marking selection

10.1.1 Label mark should be hung on rod/bar with the diameter less than 10mm. For the rod/bar with the diameter not less than 10mm but less than 50mm, label mark should be used, and ink jet marking and combination C may also be used. For the rod/bar with the diameter not less than 50mm, nick marking should be used, and ink jet marking, label mark and combination C may also be used.

10.1.1 Hanging sign should be used for rod/bar less than 10mm in diameter. Label mark should be used for rod/bar 10mm and over and less than 50mm in diameter, ink jet marking and combination C may also be used. Nick marking should be used for rod/bar 50mm and over in diameter, ink jet marking, label mark and combination C may also be used.

10.1.2 The marking of aluminium and aluminium alloy rod/bar for aerospace shall conform to B.4.

#### 10.2 Marking information

Marking information for rod/bar shall conform to Table 6.

Table 6 Marking information

Marking information	Marking information <sup>a</sup>		
	Nick marking	Ink jet marking	Label mark <sup>b</sup>
Designation	Shall be marked.		
Temper			
Dimension	Shall be marked (if required).	Shall be marked with outside diameter and wall thickness. Shall be marked with fixed length (if required).	Shall be marked.
Product standard number		Shall be marked.	
Lot number	Shall be marked.		
Manufacturer's name (or code)	Shall be marked (if required).	Shall be marked.	
Inspection stamp of supplier's technical supervision department	Shall be marked.		
Weight	Shall not be marked.		Shall be marked (if required).
Heat number			
Supplier address			
Supplier contact information			
Production date			
Packaging date			
<sup>a</sup> The information of information marking shall conform to the requirements of label mark. <sup>b</sup> When hanging sign is used, the marking may exclude product standard number and manufacturer's			

name (or code).
-----------------

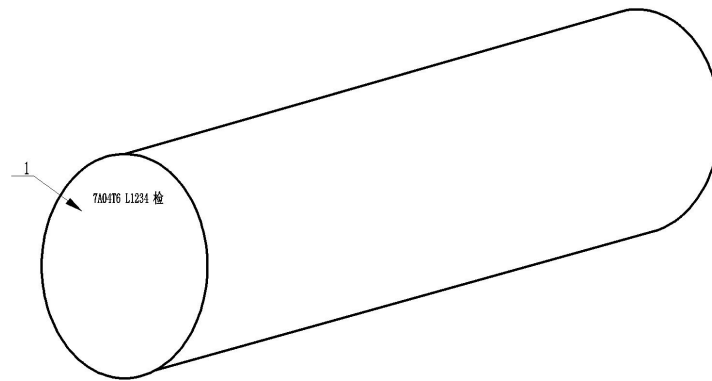
### 10.3 Marking rules

#### 10.3.1 Nick marking

Nick marking shall be used on the cross section of the rod/bar head end in the order of designation, temper, dimension (if required), product standard number (if required), lot number, manufacturer's name (or code) (if required) and the inspection stamp by the supplier's technical supervision department. The marking information can be expressed in one row, two rows or three rows.

Example:

The schematic diagram of nick marking, which contains such information as designation 7A04, temper T6, lot number L1234 and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown Figure 28.



Keys:

1 Rod/bar head, extrusion head for the extruded one and either end for the drawn (rolled) one.

Figure 28 Schematic diagram of nick marking on rod/bar

#### 10.3.2 Ink jet marking

##### 10.3.2.1 Spot ink jet marking

10.3.2.1.1 Spot ink jet marking shall be used on the surface of rod/bar in the order of designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. The marking information should be expressed in one row.

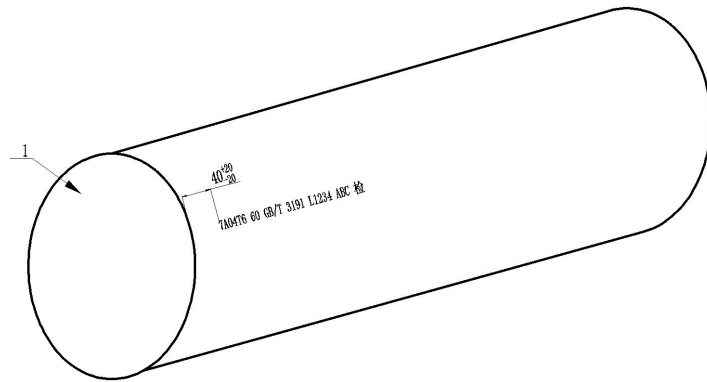
10.3.2.1.2 Spot marking shall start  $(40 \pm 20)$  mm from the head and should run along the rod/bar surface as a straight line.

Example:

The schematic diagram of spot ink jet marking, which contains such information as designation 7A04, temper T6, 60mm in diameter, product standard number GB/T 3191, lot number L1234,

manufacturer's name (or code) ABC and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 29.

Unit: mm



Keys:

1 Rod/bar head, extrusion head for the extruded one and either end for the drawn (rolled) one.

Figure 29 Schematic diagram of spot ink jet marking on rod/bar

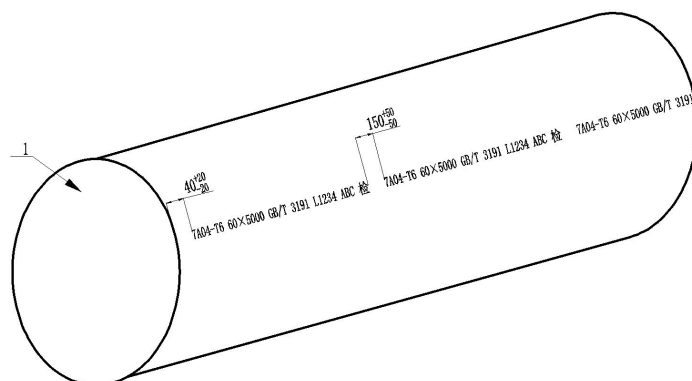
### 10.3.2.2 Continuous ink jet marking

10.3.2.2.1 Continuous ink jet marking shall be used on the surface of rod/bar in the order of designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), and the inspection stamp of the supplier's technical supervision department. The marking information should be expressed in one row.

10.3.2.2.2 Continuous ink jet marking on rod/bar shall start  $(40 \pm 20)$  mm from the head, the distance between each set shall be  $(150 \pm 50)$  mm, and should run along the surface as a straight line.

Example:

The schematic diagram of continuous ink jet marking, which contains such information as designation 7A04, temper T6, 60mm (diameter)  $\times$  5000mm (specified length), product standard number GB/T 3191, lot number L1234, manufacturer's name (or code) ABC and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 30.



Keys:

1 Rod/bar head, extrusion head for the extruded one and either end for the drawn (rolled) one.

Figure 30 Schematic diagram of continuous ink jet marking on rod/bar

10.3.3 Label mark

Labeling or hanging sign shall be used on the outer surface near the head end of rod/bar, including designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), the inspection stamp of the supplier's technical supervision department, and might also include any other information required by the purchaser.

Example 1:

The schematic diagram of label mark, which contains such information as designation 7A04, temper T6, 60mm (diameter) × 5000mm (specified length), product standard number GB/T 3191, lot number L1234, manufacturer's name (or code) ABC and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 31.

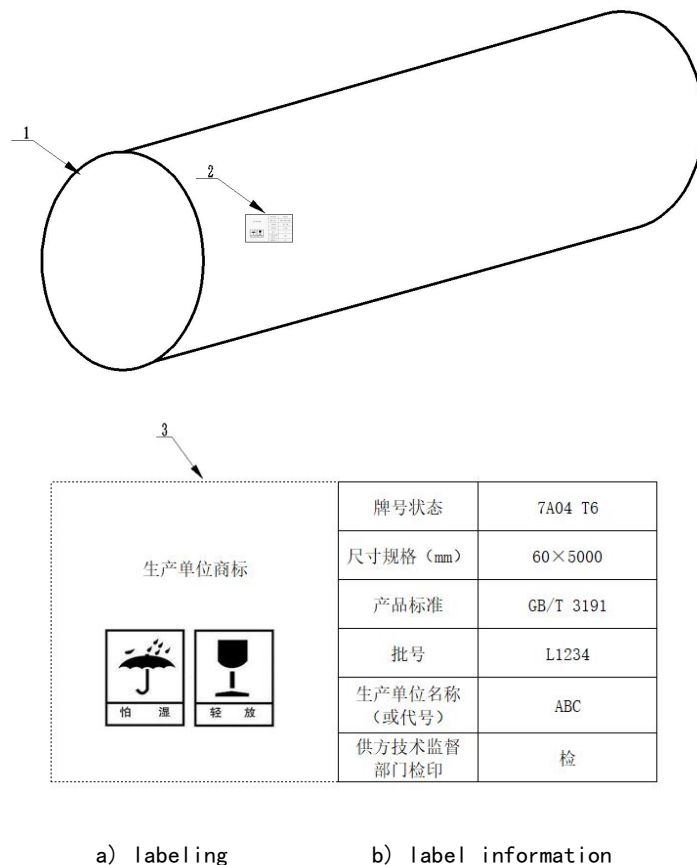


Figure 31b) 表格

Trademark of manufacturer	Designation and temper		7A04 T6
	Dimension (mm)		60×5000
	Product standard		GB/T 3191
No	Handle	Lot number	L1234

moisture!	with	Manufacturer's name (or code)	ABC
	care!	The inspection stamp of the supplier's technical supervision department	Inspection

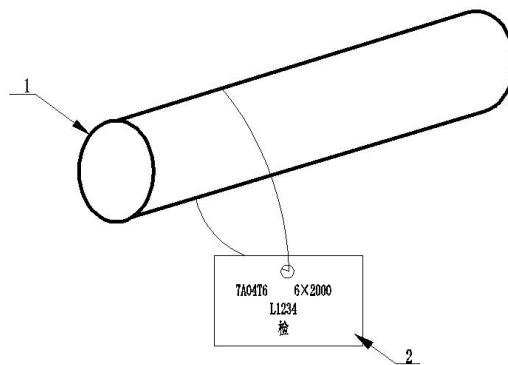
Keys:

- 1 Rod/bar head, extrusion head for the extruded one and either end for the drawn (rolled) one;
- 2 Schematic diagram of labeling on rod/bar;
- 3 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 31 Schematic diagram of labeling on rod/bar

Example 2:

The schematic diagram of label mark, which contains such information as designation 7A04, temper T6, 60mm (diameter) × 2000mm (specified length), lot number L1234 and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure 32.



Keys:

- 1 Rod/bar head, extrusion head for the extruded one and either end for the drawn (rolled) one;
- 2 Schematic diagram of hanging sign on rod/bar.

Figure 32 Schematic diagram of hanging sign on rod/bar

### 10.3.4 Information marking

The information of information marking on rod/bar shall conform to 10.3.3, and the marking method shall conform to 6.3.1.4.2.

## 11 Profile marking

### 11.1 Marking selection

11.1.1 Label mark should be hung for profile with the wall thickness less than 7mm and less than 10mm in width of any side. For the profile with the wall thickness less than 7mm but the width of any side not less than 10mm, label mark should be hung, and ink jet marking and combination C may also be used. For the profile with

the wall thickness not less than 7mm, nick marking should be used, and ink jet marking, label mark and combination marking may also be used.

11.1.1 Hanging sign should be used for the profile less than 7mm in wall thickness and less than 10mm in width of any side. Hanging sign should be used for profile less than 7mm in wall thickness and 10mm and over in width of any side, ink jet marking and combination C may also be used. Nick marking should be used for profile 7mm and over in wall thickness, ink jet marking, label mark and combination marking may also be used.

11.1.2 The marking of aluminium and aluminium alloy profile for aerospace shall conform to B.5.

11.2 Marking information

Marking information for profile shall conform to Table 7.

Table 7 Marking information for profile

Marking information	Marking information <sup>a</sup>		
	Nick marking	Ink jet marking	Label mark <sup>b</sup>
Designation	Shall be marked.		
Temper			
Dimension or profile section code	Shall be marked with profile section code or dimension.	Shall be marked with profile section code or dimension. Shall be marked with fixed length (if required).	Shall be marked.
Product standard number	Shall be marked (if required).	Shall be marked.	
Lot number (or production date, limited to building materials)	Shall be marked.		
Coating code, color or colour code of surface-treated profile	Shall be marked for surface-treated profile.		

Manufacturer's name (or code)	Shall be marked (if required).	Shall be marked.
Inspection stamp of supplier's technical supervision department	Shall be marked.	
Weight	Shall not be marked.	Shall be marked (if required).
Heat number		
Supplier address		
Supplier contact information		
Production date		
Packaging date		
<p><sup>a</sup>The information of information marking shall conform to the requirements of label mark.</p> <p><sup>b</sup>When hanging sign is used, the marking may exclude product standard number and manufacturer's name (or code).</p>		

### 11.3 Marking rules

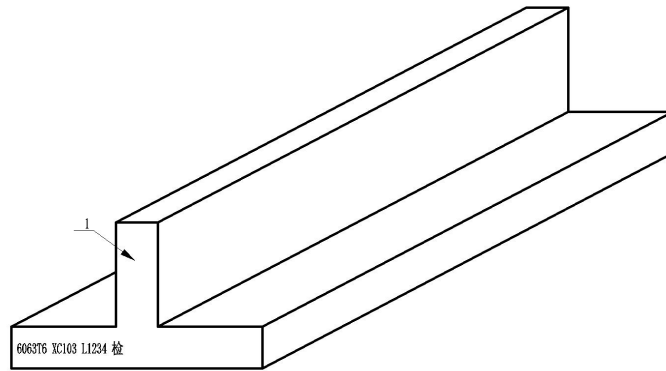
#### 11.3.1 Nick marking

Nick marking shall be used on the cross section wall thickness or surface of the profile head in the order of designation, temper, dimension or profile section code, product standard number (if required), lot number (or production date, limited to building materials), film code, color or color number of surface-treated profile (if required), manufacturer's name (or code) (if required) and the inspection stamp by the supplier's technical supervision department. The marking information can be expressed in one row, two rows or three rows.

Example 1:

The schematic diagram of nick marking, which contains such information as designation 6063, temper T6, section code XC103, lot number L1234 and the inspection stamp by the supplier's technical supervision department as "Inspection", is shown in Figure 33.





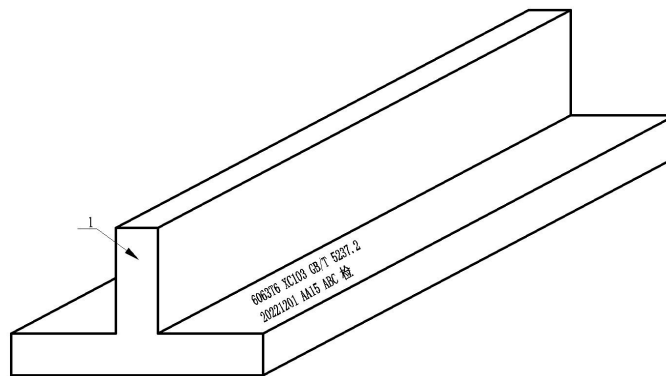
Keys:

1 Profile head, extrusion head for uninterrupted one and extrusion head and any other end for interrupted one.

Figure 33 Schematic diagram of nick marking on profile

Example 2:

The schematic diagram of nick marking, which contains such information as designation 6063, temper T6, section code XC103, product standard number GB/T 5327.2, production date 20221201, surface code AA15, manufacturer's name (or code) ABC and the inspection stamp by the supplier's technical supervision department as "Inspection", is shown in Figure 34.



Keys:

1 Profile head, extrusion head for uninterrupted one and extrusion head and any other end for interrupted one.

Figure 34 Schematic diagram of nick marking on profile

### 11.3.2 Ink jet marking

#### 11.3.2.1 Spot ink jet marking

11.3.2.1.1 Spot ink jet marking shall be used on the surface of profile in the order of designation, temper, dimension, product standard number, lot number (or production date, limited to building materials), coating code, color or color number

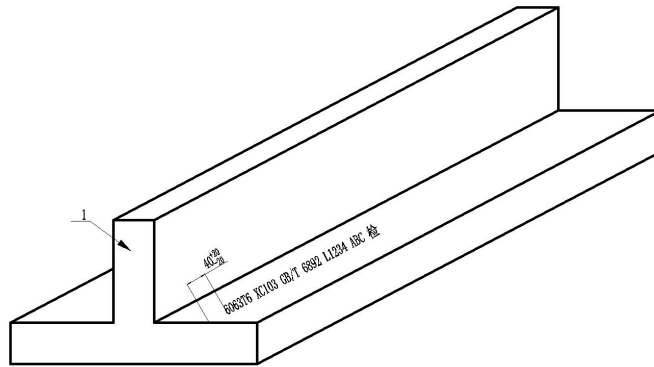
(if required) of the surface-treated profile, manufacturer's name (or code), and inspection stamp by the supplier's technical supervision department. The marking information should be expressed in one row.

11.3.2.1.2 Spot marking shall start  $(40\pm 20)$  mm from the head end and should run along the profile surface as a straight line.

Example:

The schematic diagram of spot ink jet marking, which contains such information as designation 6063, temper T6, section code XC103, product standard number GB/T 6892, lot number L1234, manufacturer's name (or code) ABC and the inspection stamp by the supplier's technical supervision department as "Inspection", is shown in Figure 35.

Unit: mm



Keys:

1 Profile head, extrusion head for uninterrupted one and extrusion head and any other end for interrupted one.

Figure 35 Schematic diagram of spot ink jet marking on profile

### 11.3.2.2 Continuous ink jet marking

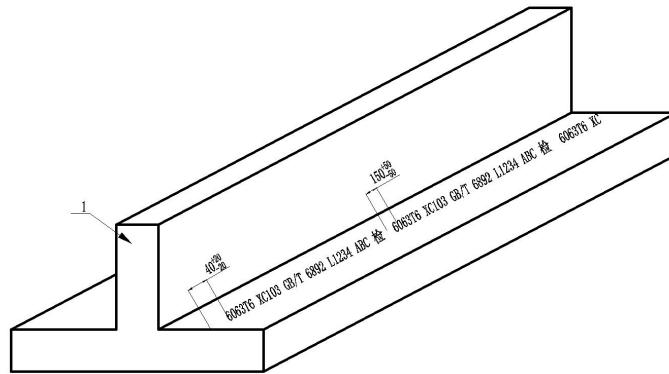
11.3.2.2.1 Continuous ink jet marking shall be used on the surface of profile in the order of designation, temper, dimension, product standard number, lot number (or production date, limited to building materials), coating code, color or color number (if required) of the surface-treated profile, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. The marking information should be expressed in one row.

11.3.2.2.2 Continuous ink jet marking on profile shall start  $(40\pm 20)$  mm from the head, the distance between each set shall be  $(150\pm 50)$  mm, and should run along the surface as a straight line.

Example:

The schematic diagram of continuous ink jet marking, which contains such information as designation 6063, temper T6, section code XC103, product standard number GB/T 6892, lot number

L1234, manufacturer's name (or code) ABC and the inspection stamp by the supplier's technical supervision department as "Inspection", is shown in Figure 36.



Keys:

1 Profile head, extrusion head for extruded tube and any end for drawn (rolled) one.

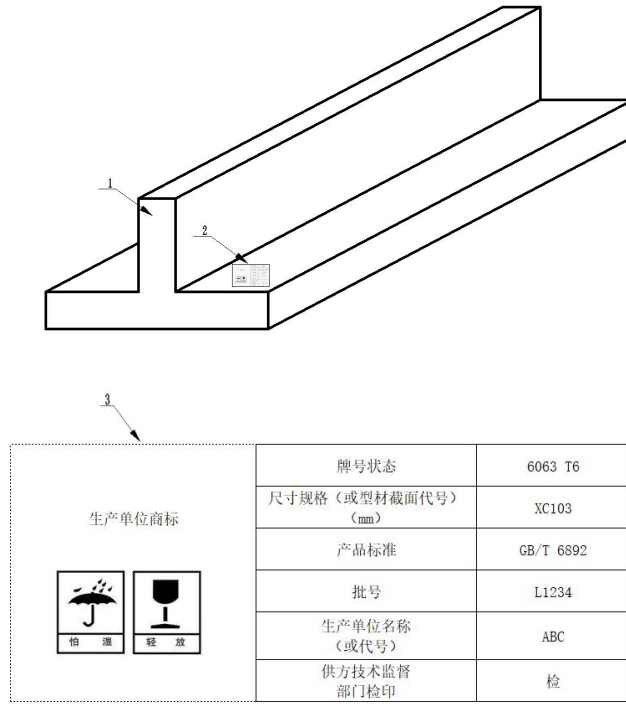
Figure 36 Schematic diagram of continuous ink jet marking on profile

### 11.3.3 Label mark

Labeling or hanging sign shall be used on the outer surface near the head of profile, including designation, temper (or production date, limited to building materials), dimension, product standard number, lot number, film code, color or color number (if required) of the surface-treated profile, manufacturer's name (or code), the inspection stamp of the supplier's technical supervision department, and might also include any other information required by the purchaser.

Example 1:

The schematic diagram of label mark, which contains such information as designation 6063, temper T6, section code XC103, product standard number GB/T 6892, lot number L1234, manufacturer's name (or code) ABC and the inspection stamp by the supplier's technical supervision department as "Inspection", is shown in Figure 37.



a) labeling

b) label information

Figure 37b) 表格		
Trademark of manufacturer	Designation and temper	6063 T6
	Dimension (or section code) (mm)	XC103
	Product standard	GB/T 6892
No moisture! Handle with care!	Lot number	L1234
	Manufacturer's name (or code)	ABC
	The inspection stamp of the supplier's technical supervision department	Inspection

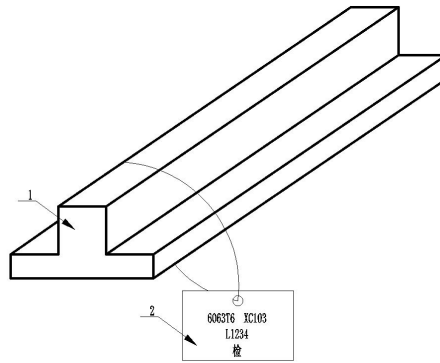
Keys:

- 1 Profile head, extrusion head for uninterrupted one and any other end for interrupted one;
- 2 Schematic diagram of labeling on profile;
- 3 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 37 Schematic diagram of labeling on profile

Example 2:

The schematic diagram of label mark, which contains such information as designation 6063, temper T6, section code XC103, lot number L1234 and the inspection stamp by the supplier's technical supervision department as "Inspection", is shown in Figure 38.



Keys:

- 1 Profile head, extrusion head for uninterrupted one and any other end for interrupted one;
- 2 Schematic diagram of hanging sign on profile.

Figure 38 Schematic diagram of hanging sign on profile

11.3.4 Information marking

The information of information marking on profile shall conform to 11.3.3, and the marking method shall conform to 6.3.1.4.2.

12 Wire marking

12.1 Marking selection

Label mark should be used for wire.

The marking of aluminium and aluminium alloy wire for aerospace shall conform to B.6 .

12.2 Marking information

Marking information for wire shall conform to Table 8.

Table 8 Marking information for wire

Marking information	Label mark <sup>a</sup>	
	Hanging sign	Labeling
Product name	Shall not be marked.	Shall be marked.
Designation	Shall be marked.	
Temper		
Dimension	Shall be marked with	Shall be marked with diameter.

	diameter.	Shall be marked with wire length for straight welding.
Product standard number	Shall be marked (if required).	
Lot number	Shall be marked.	
Manufacturer's name (or code)	Shall not be marked.	Shall be marked.
Inspection stamp of supplier's technical supervision department	Shall be marked.	
Weight	Shall not be marked.	Shall be marked (if required).
Heat number		
Supplier address		
Supplier contact information		
Production date		
Packaging date		
<sup>a</sup> The information of coding marking shall conform to the requirements of label mark.		

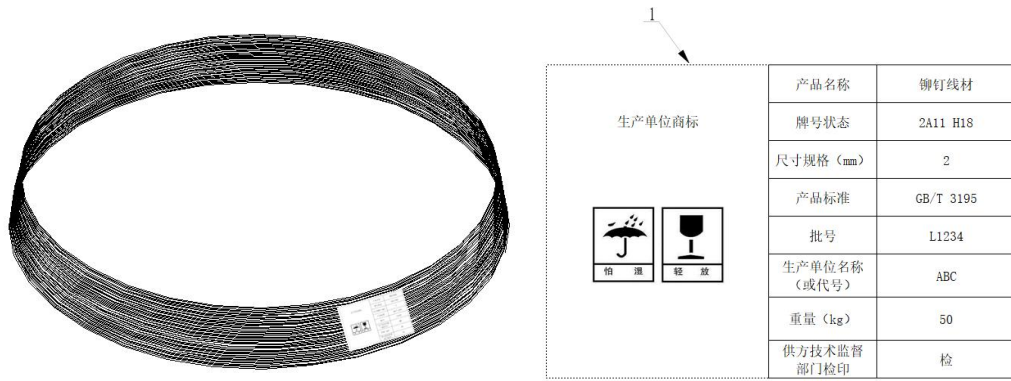
### 12.3 Marking rules

#### 12.3.1 label mark

Labeling or hanging sign shall be used on the outside of wire coil, the outside of wire drum, the side of wire drum or the wire package, including product name, designation, temper, diameter, product standard number, lot number, manufacturer's name (or code), the inspection stamp of the supplier's technical supervision department, and might also include any other information required by the purchaser.

Example 1:

The schematic diagram of label mark, which contains such information as designation 2A11, temper H18, 2.0mm (diameter), product standard number GB/T 3195, lot number L1234, manufacturer's name (or code) ABC, 50Kg (weight), and the inspection stamp by the supplier's technical supervision department, is shown in Figure 39.



a) labeling

b) label information

Figure 39b) 表格

Trademark of manufacturer		Product name	Rivet wire
		Designation and temper	2A11 H18
		Dimension (mm)	2
		Product standard	GB/T 3195
No moisture!	Handle with care!	Lot number	L1234
		Manufacturer's name (or code)	ABC
		Weight (Kg)	50
		The inspection stamp of the supplier's technical supervision department	Inspection

Keys:

1 The information within the dashed box is additional and might be optional, and its position might be adjustable.

Figure 39 Schematic diagram of labeling on wire

Example 2:

The schematic diagram of label mark, which contains such information as designation 5A02, temper 0, 2.0mm (diameter), lot number L1234, and the inspection stamp by the supplier's technical supervision department as "Inspection", is shown in Figure 40.

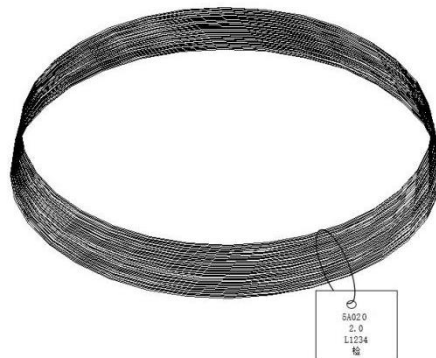


Figure 40 Schematic diagram of hanging sign on wire

## 12.3.2 Information marking

The information of information marking on wire shall conform to 10.3.1, and the marking method shall conform to 6.3.1.4.2.

## 13 Forging marking

## 13.1 Marking selection

Nick marking should be used for forging, ink jet marking, label mark and combination marking may also be used.

The marking of aluminium and aluminium alloy forging for aerospace shall conform to B.7.

## 13.2 Marking information

Marking information for forging shall conform to Table 9.

Table 9 Marking information for forging

Marking information	Marking information <sup>a</sup>		
	Nick marking	Ink jet marking	Label mark
Designation	Shall be marked.		Shall be marked.
Temper			
Dimension or forging code	Shall be marked. Can be omitted for the small dimension.		
Product standard number	Shall be marked (if required).	Shall be marked.	
Lot number	Shall be marked.		
Quenching number			
Manufacturer's name (or code)	Shall be marked (if required).	Shall be marked.	
Inspection stamp of supplier's technical	Shall be marked.		



supervision department		
Weight	Shall not be marked.	Shall be marked (if required).
Supplier address	Shall not be marked.	Shall be marked (if required).
Supplier contact information		
Production date		
Packaging date		
<sup>a</sup> The information of information marking shall conform to the requirements of label mark.		

### 13.3 Marking rules

#### 13.3.1 Nick marking

Nick marking shall be used on the external surface of forging or at the position specified in the drawing signed by the purchaser and the supplier, in the order of designation, temper, dimension or forging code (the marking can be omitted for the small dimension), product standard number (if required), lot number, quenching number, manufacturer's name (or code) (if required), and the inspection stamp by the supplier's technical supervision department. The marking information can be expressed in one row or multiple rows.

Example:

The schematic diagram of nick marking, which contains such information as designation 7A09, temper T7352, forging code ZD105, lot number L1234, heat number 1-1, and the inspection stamp of the supplier's technical supervision department, is shown in Figure 41.

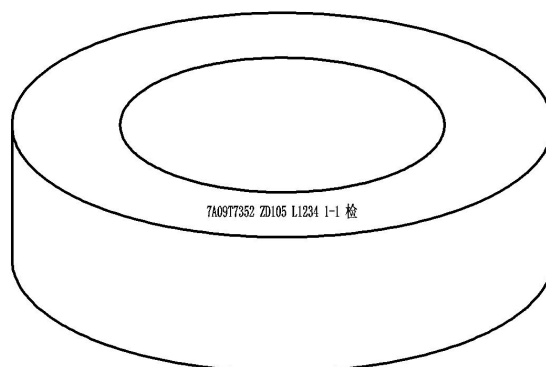


Figure 41 Schematic diagram of nick marking on forging

#### 13.3.2 Ink jet marking

Ink jet marking shall be used on the external surface of forging or at the position specified in the drawing signed by the purchaser and the supplier, in the order of designation, temper, dimension, forging code, product standard number, lot number, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. The marking information can be expressed in one row or multiple rows.

Example:

The schematic diagram of ink jet marking, which contains such information as designation 7A09, temper T7352, forging code DQ105, product standard number GB/T 8545, lot number L1234, heat number 1-1, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department, is shown in Figure 42.

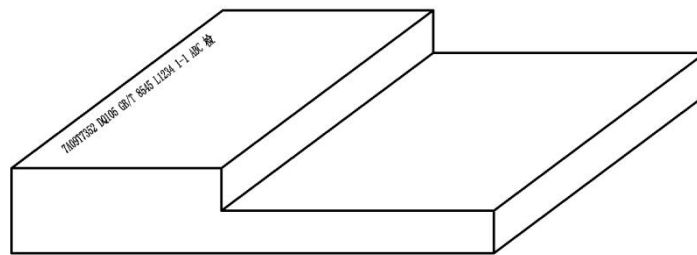


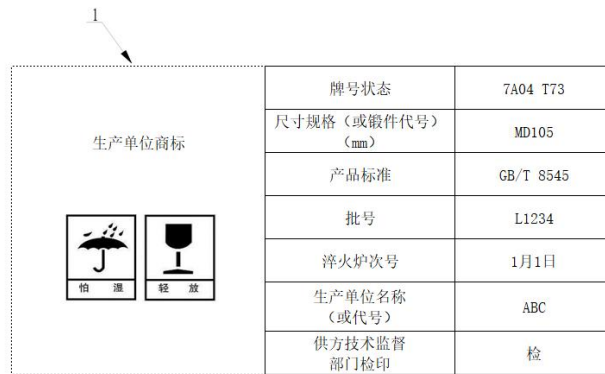
Figure 42 Schematic diagram of ink jet marking on forging

### 13.3.3 label mark

Labeling shall be used on the external surface of forging or at the position specified in the drawing signed by the purchaser and the supplier, which shall include designation, temper, dimension or forging code, product standard number, lot number, manufacturer's name (or code), the inspection stamp of the supplier's technical supervision department, and might also include any other information required by the purchaser.

Example:

The schematic diagram of label mark, which contains such information as designation 7A04, temper T73, forging code MD105, product standard number GB/T 8545, lot number L1234, Heat number 1-1, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department, is shown in Figure 43.



a) labeling

b) label information

Figure 43b) 表格		
Trademark of manufacturer	Designation and temper	7A04 T73
	Dimension or forging code (mm)	MD105
	Product standard	GB/T 8545
No moisture!  Handle with care!	Lot number	L1234
	Quenching number	Jan. 1
	Manufacturer's name (or code)	ABC
	The inspection stamp of the supplier's technical supervision department	Inspection

Figure 43 Schematic diagram of labeling on forging

### 13.3.4 Information marking

The information of information marking on forging shall conform to 7.3, and the marking method shall conform to 6.3.1.4.2

Annex A

(Informative)

Schematic diagram of identification marking

A.1 Steel stamping marking

For the steel stamping marking, see Figure A.1. (建议写完整句式)



a) Marking process

b) Marking effect

Figure A.1 Schematic diagram of steel stamping marking

A.2 Pneumatic marking

For the pneumatic marking, see Figure A.2.



a) Marking process

b) Marking effect

Figure A.2 Schematic diagram of pneumatic marking

A.3 Laser marking

For the laser marking, see Figure A.3.



a) Marking process

b) Marking effect

Figure A.3 Schematic diagram of laser marking

#### A.4 Ink jet marking

For the ink jet marking, see Figure A.4.



a) Marking process

b) Marking effect

Figure A.4 Schematic diagram of ink jet marking

#### A.5 Hanging sign

For the hanging sign, see Figure A.5.



a) Marking process

b) Marking effect

Figure A.5 Schematic diagram of hanging sign

A.6 Labeling

For the labeling, see Figure A.6.



a) Marking process

b) Marking effect

Figure A.6 Schematic diagram of labeling

A.7 Combination A marking

For combination A marking (nick marking + ink jet marking), see Figure A.7.



Figure A.7 Schematic diagram of combination A marking

A.8 Combination B marking

For combination B marking (nick marking + label mark), see Figure A.8.



Figure A.8 Schematic diagram of combination B marking

A.9 Combination C marking

For combination C marking (ink jet marking + label mark), see Figure A.9.



Figure A.9 Schematic diagram of combination C marking

A.10 Head and tail marking

For head and tail marking on extruded rod/bar, see Figure A.10.





a) Extruded rod/bar head

b) Extruded rod/bar tail

Figure A.10 Schematic diagram of head and tail marking



## Annex B (Normative)

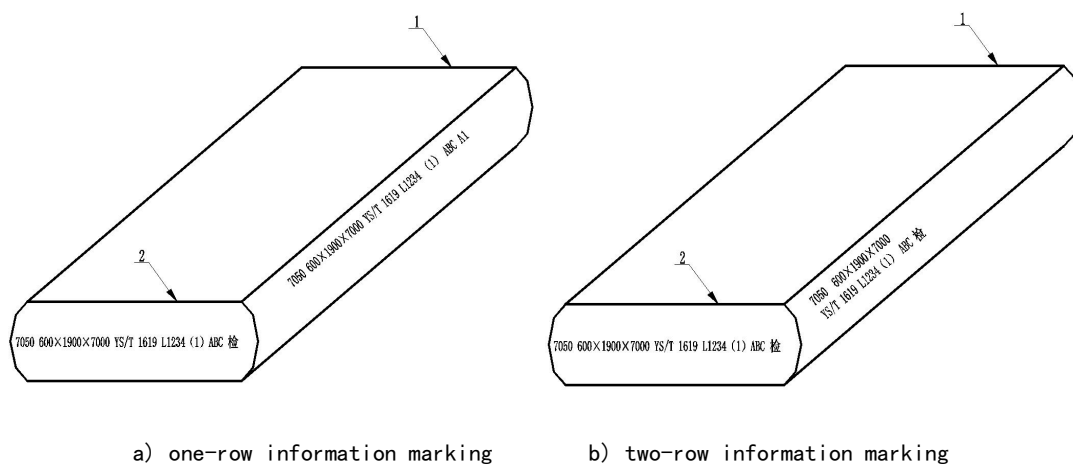
### Identification marking for aerospace product

#### B.1 Ingot

Combination A marking shall be used for ingot. When nick marking cannot be used on ingot without head cutting or tail cutting, ink jet marking should be used in the order of designation, temper (with O<sub>3</sub> for the homogenized ingot and no marking for the as-cast ingot), dimension, product standard number, cast number, piece number, manufacturer's name (or code), and the inspection stamp of the supplier's technical supervision department. The marking examples are as follows:

Example 1:

The schematic diagram of information marking, which contains such information as designation 7050, as-cast temper, 600mm (thickness) × 1900mm (width) × 7000mm (length), product standard number YS/T 1619, cast number L1234, piece number 1-1, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department, is shown in Figure B.1 a) as one row and Figure B.1 b) as two rows.



Keys:

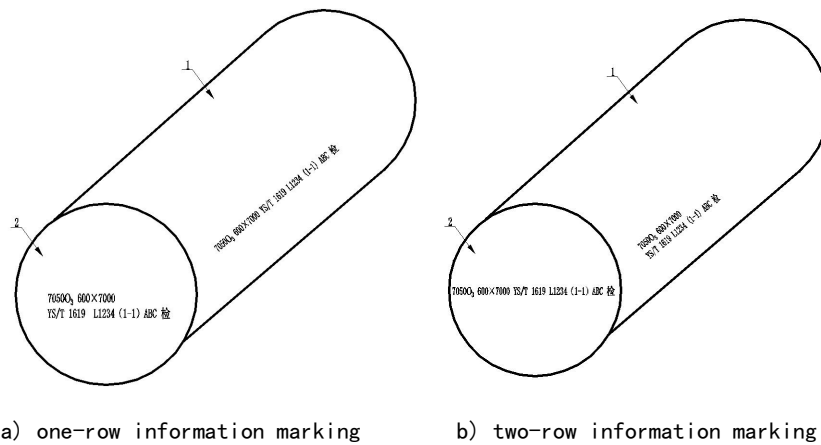
- 1 Ingot head (ingot gate) after head cutting and tail cutting;
- 2 Billet tail (dummy billet head) after head cutting and tail cutting.

Figure B.1 Marking on aluminium alloy ingot for aerospace

Example 2:

The schematic diagram of information marking, which contains such information as designation 7050 homogenizing temper, 600mm (diameter) × 7000mm (length), product standard number YS/T 1619, cast number L1234, piece number 1-1, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department, is shown in Figure B.2 a) as one row and Figure

B.2 b) as two rows.



a) one-row information marking

b) two-row information marking

Keys:

1 Billet surface;

2 Casting tail face of billet.

Figure B.2 Marking on aluminium alloy billet for aerospace

## B.2 Sheet/plate

Ink jet marking shall be used for sheet/plate with the thickness not greater than 10mm. For the sheet/plate with thickness greater than 10mm, combination A shall be used. Perimeter marking shall be used in the order of designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. The marking examples are as follows:

Ink jet marking shall be used for sheet/plate up through 10mm in thickness. Combination A shall be used for sheet/plate over 10mm in thickness. Perimeter marking shall be used in the order of designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department.

Example 1:

The schematic diagram of marking, which contains such information as designation 7055, temper T7751, 8mm (thickness) × 1900mm (width) × 7000mm (length), product standard number GB/T 40321, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department, is shown in Figure B.3.

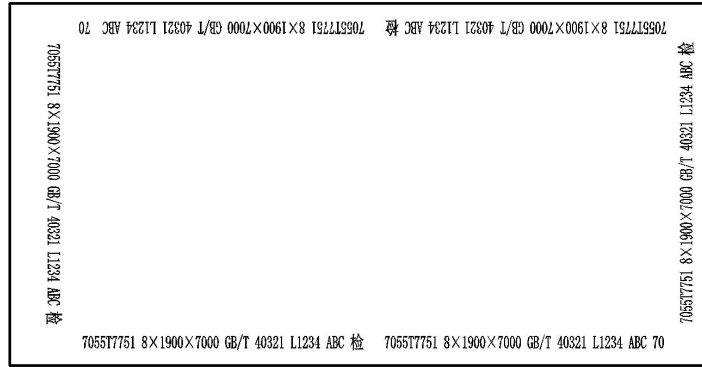
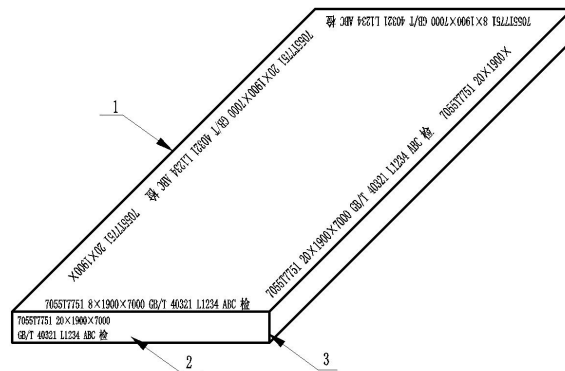


Figure B.3 Marking on aluminium alloy sheet/plate for aerospace  
(up through 10mm in thickness)

Example 2:

The schematic diagram of marking, which contains such information as designation 7055, temper T7751, 20mm (thickness) × 1900mm (width) × 7000mm (length), product standard number GB/T 40321, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department, is shown in Figure B.4.



Keys:

- 1 Rolling direction of sheet/plate;
- 2 Width direction of sheet/plate;
- 3 Height direction of sheet/plate.

Figure B.4 Marking on aluminium alloy sheet/plate for aerospace  
(over 10mm in thickness)

### B.3 Tube

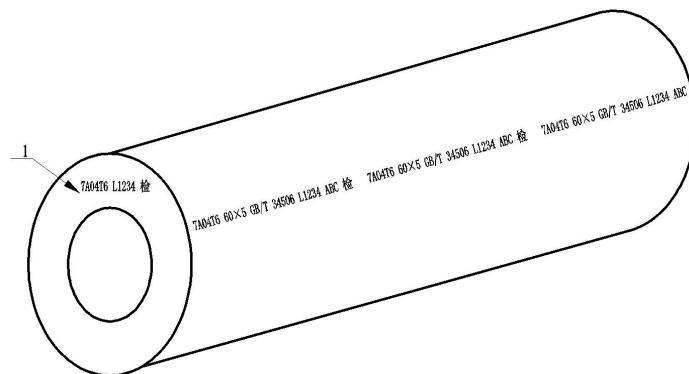
Combination A shall be used for tube with the wall thickness not less than 7mm. Ink jet marking shall be used for tube with the wall thickness less than 7mm and the diameter not less than 10mm. Label mark shall be used for tube with the wall thickness less than 7mm and the diameter less than 10mm. Continuous marking shall be used in

the order of designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), and inspection stamp by the supplier's technical supervision department in one row. Continuous marking on pipe/tube shall start 20mm~30mm from the head end, the distance between each set should be 20mm, and should run along the surface as a straight line.

Combination A marking shall be used for tube 7mm and over in wall thickness. Ink jet marking shall be used for tube less than 7mm in wall thickness and 10mm and over in diameter. Label mark shall be used for tube less than 7mm in wall thickness and less than 10mm in diameter. Continuous marking shall be used in one row in the order of designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), and inspection stamp by the supplier's technical supervision department. Continuous marking on tube shall start 20mm~30mm from the head end, should keep a distance of 20mm between each set and run along the surface as a straight line.

Example 1:

The schematic diagram of marking, which contains such information as designation 7A04, temper T6, 60mm (outside diameter) × 5mm (wall thickness), product standard number GB/T 34506, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department, is shown in Figure B.5.



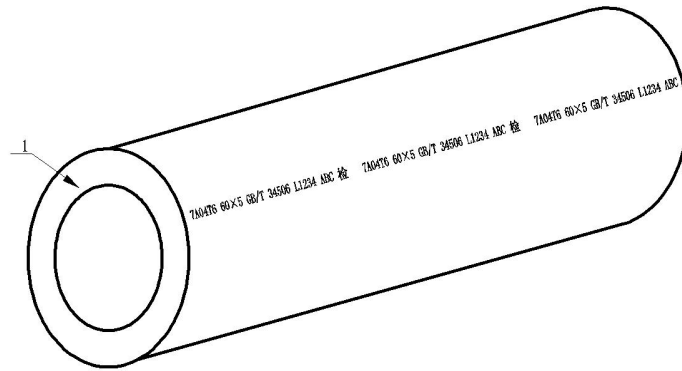
Keys:

1 Tube head, extrusion head of the extruded one and any end of the drawn (rolled) one.

Figure B.5 Marking on aluminium alloy tube for aerospace  
(7mm and over in wall thickness)

Example 2:

The schematic diagram of marking, which contains such information as designation 7A04, temper T6, 60mm (outside diameter) × 5mm (wall thickness), product standard number GB/T 34506, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department, is shown in Figure B.6.



Keys:

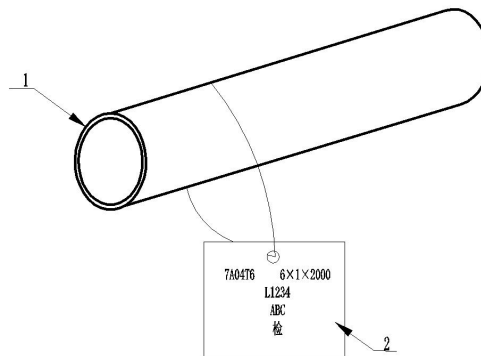
1 Tube head, extrusion head of the extruded one and any end of the drawn (rolled) one.

Figure B.6 Marking on aluminium alloy tube for aerospace

(less than 7mm in wall thickness and 10mm and over in diameter)

Example 3:

The schematic diagram of marking, which contains such information as designation 7A04, temper T6, 6mm (diameter) × 1mm (wall thickness) × 2000mm (specified length), lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure B.7.



Keys:

1 Tube head, extrusion head of the extruded one and any end of the drawn (rolled) one.

2 Hanging sign on tube.

Figure B.7 Marking on aluminium alloy tube for aerospace

(less than 7mm in wall thickness and less than 10mm in diameter)

#### B. 4 Rod/bar

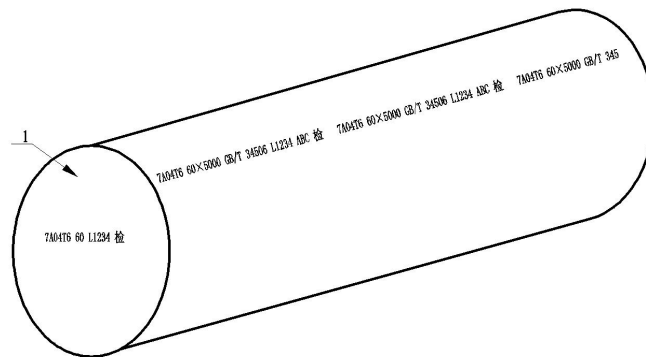
Combination A marking shall be used for rod/bar with the diameter not less than 10mm. Nick marking shall be used on the head end section of rod/bar with the diameter

greater than 50mm, and on the head end surface of the rod/bar with the diameter 10mm~50mm in diameter. Label mark shall be hung on the rod/bar with the diameter less than 10mm. Marking shall be in one row in the order of designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. Marking on rod/bar shall start 20mm~30mm from the head, the distance between each set should be 20mm and should run along the surface as a straight line.

Combination A marking shall be used for rod/bar 10mm and over in diameter. Nick marking shall be used on the head end section of rod/bar over 50mm in diameter, and on the head end surface of rod/bar 10~50mm in diameter. Hanging sign shall be used on rod/bar less than 10mm in diameter. Marking shall be in one row in the order of designation, temper, dimension, product standard number, lot number, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. Marking on rod/bar shall start 20mm~30mm from the head, should keep a distance of 20mm between each group and run along the surface as a straight line.

Example 1:

The schematic diagram of marking, which contains such information as designation 7A04, T6 temper, 60mm (diameter) × 5000mm (specified length), product standard number GB/T 34606, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection" is shown in Figure B.8.



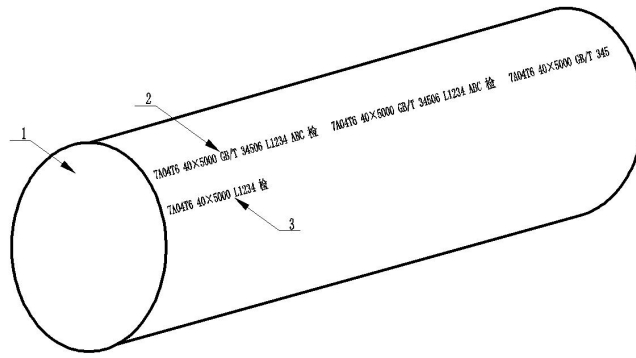
Keys:

1 Head of rod/bar, extrusion head of the extruded one and any end of the drawn (rolled) one.

Figure B.8 Marking on aluminium alloy rod/bar for aerospace  
(50mm and over in diameter)

Example 2:

The schematic diagram of marking, which contains such information as designation 7A04, T6 temper, 40mm (diameter) × 5000mm (specified length), product standard number GB/T 34506, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure B.9.



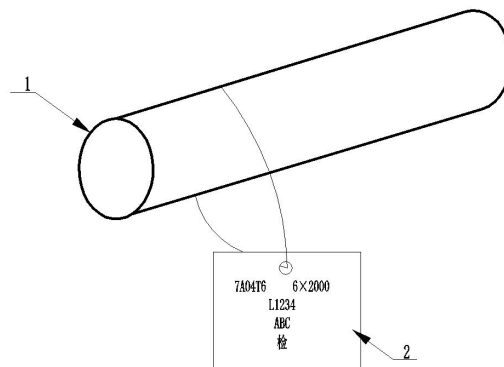
Keys:

- 1 Head of rod/bar, extrusion head of the extruded one and any end of the drawn (rolled) one;
- 2 Continuous ink jet marking;
- 3 Nick marking.

Figure B.9 Marking on aluminium alloy rod/bar for aerospace  
(10mm~50mm in diameter)

Example 3:

The schematic diagram of marking, which contains such information as designation 7A04, T6 temper, 60mm (diameter) × 2000mm (specified length), lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure B.10.



Keys:

- 1 Head of rod/bar, extrusion head of the extruded one, any end of the drawn (rolled) one;
- 2 Hanging sign on rod/bar.

Figure B.10 Markings on aluminium alloy rod/bar for aerospace  
(less than 10mm in diameter)

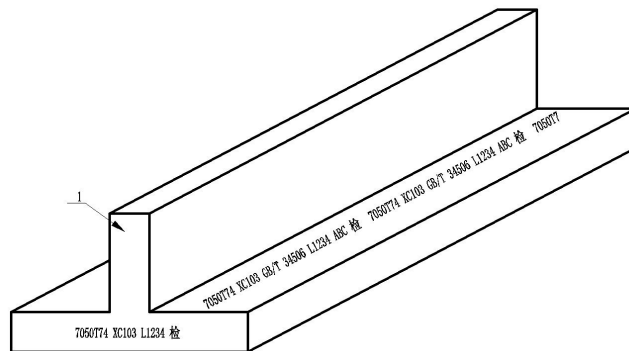
### B.5 Profile

Combination A marking shall be used for profile with the wall thickness not less than 7mm and the profile the wall thickness less than 7mm but the width of any side not less than 7mm. Label mark shall be hung on the profile with the wall thickness less than 7mm but the width of any side less than 7mm. Marking shall be in one row in the order of designation, temper, dimension or section code, product standard number, lot number, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. The marking on forging shall start 20mm~30mm from the head, the distance between each set should be 20mm and should run along the surface as a straight line.

Combination A marking shall be used for the profile 7mm and over in wall thickness and the profile less than 7mm in wall thickness and 7mm and over in width of any side. Hanging sign shall be used on the profile less than 7mm in wall thickness and width of any side. Marking shall be in one row in the order of designation, temper, dimension or section code, product standard number, lot number, manufacturer's name (or code), and the inspection stamp by the supplier's technical supervision department. The marking on forging shall start 20mm~30mm from the head, should keep a distance of 20mm between each group and run along the surface as a straight line.

Example 1:

The schematic diagram of marking, which contains such information as designation 7050, T74 temper, profile section code XC103, product standard number GB/T 34506, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure B.11.



Keys:

1 Extrusion head of profile.

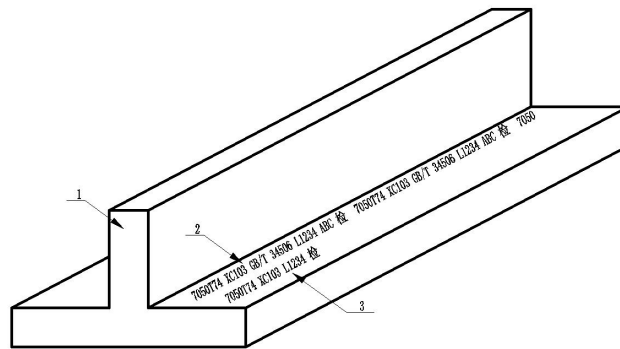
Figure A.11 Marking on aluminium alloy profile for aerospace  
(7mm and over in wall thickness)

Example 2:

The schematic diagram of marking, which contains such information as designation 7050, T74 temper, profile section code XC103, product standard number GB/T 34506, lot number L1234, manufacturer's



name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure B.12.



Keys:

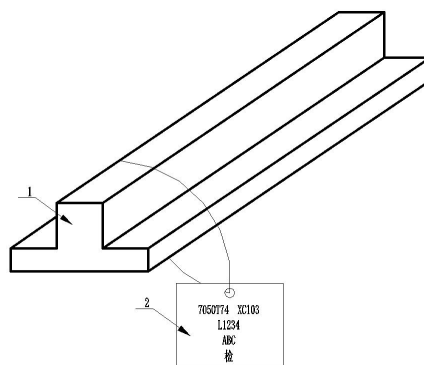
- 1 Extruded head of profile;
- 2 Ink jet marking of profile;
- 3 Nick marking of profile.

Figure B.12 Marking on aluminium alloy profile for aerospace

(less than 7mm in wall thickness and 7mm and over in width of any side)

Example 3:

The schematic diagram of marking, which contains such information as designation 7050, T74 temper, profile section code XC103, product standard number GB/T 34506, lot number L1234, manufacturer's name (or code) ABC, and the inspection stamp of the supplier's technical supervision department as "Inspection", is shown in Figure B.13.



Keys:

- 1 Extrusion head of profile;
- 2 Hanging sign on profile.

Figure B.13 Marking on aluminium alloy profile for aerospace

(less than 7mm in wall thickness and width of any side)

**B.6 Wire**

Marking on wire shall conform to Section 12.

**B.7 Forging**

Marking on forging shall conform to Chapter 13 according to product characteristics.

Nick marking should be used as unspecified.

## Bibliography

- [1] GB/T 3191 Extruded rods and bars of aluminium and aluminium alloys
- [2] GB/T 3195 Aluminium and aluminium alloys drawn round wire
- [3] GB/T 3880 (all parts) Wrought aluminium and aluminium alloy plates, sheets and strips for general engineering
- [4] GB/T 4437.1 Aluminium and aluminium alloys extruded tubes – Part 1: Seamless round tubes
- [5] GB/T 5237.2 Wrought aluminium alloy extruded profiles for architecture – Part 2: Anodized profiles
- [6] GB/T 6892 Wrought aluminium and aluminium alloys extruded profiles for general engineering
- [7] GB/T 8545 Aluminium alloy forgings
- [8] GB/T 21049 Chinese-sensible code
- [9] GB/T 22641 Aluminium alloys sheet and plate for ships
- [10] GB/T 34506 High strength and toughness Al-Zn-Mg-Cu series aluminium alloy extrusion products
- [11] GB/T 40321 High strength and toughness Al-Zn-Mg-Cu series aluminium alloy plate
- [12] YS/T 67 Wrought aluminium and aluminium alloys columniform ingots
- [13] YS/T 590 Wrought aluminium and aluminium alloy rectangle ingots
- [14] YS/T 1619 Aluminium alloy ingots for aviation products