INTERNATIONAL STANDARD

ISO 6932

Fourth edition
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Cold-reduced carbon steel strip with a maximum carbon content of 0,25 %

Feuillards en acier au carbone laminés à froid avec une teneur maximale en carbone égale à 0,25 %

Reference number
ISO 6932:2014(E)

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 17, *Steel*, Subcommittee SC 12, *Continuous mill flat rolled products*.

This fourth edition cancels and replaces the third edition (ISO 6932:2008), which has been technically revised.

Cold-reduced carbon steel strip with a maximum carbon content of 0,25 %

1 Scope

This International Standard describes cold-reduced carbon steel strip with a maximum mass fraction of carbon of 0,25 %, furnished to two levels of closer tolerances than cold-reduced carbon steel sheet, with specific quality, specific hardness requirements or mechanical properties, specific edge, and specific finish.

NOTE This International Standard does not apply to the product in narrow widths known as cold-reduced carbon steel sheet slit from wider widths (see ISO 3574), nor does it include cold-reduced carbon steel strip with a mass fraction of carbon over 0,25 % (see ISO 4960).

Cold-reduced carbon steel strip is produced with a maximum mass fraction of the specified carbon not exceeding:

— 0,15 % for material specified to mechanical properties;

— 0,25 % for material specified to temper (hardness) requirements.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
cold-reduced carbon steel strip
product manufactured from hot-rolled, descaled coils by cold reducing to the desired thickness on a single-stand mill or on a tandem mill consisting of several single stands in series

3.2
cold reduction
process of reducing the thickness of the strip at room temperature whereby the amount of reduction is greater than that used for a *skin pass* (3.8)

3.3
aluminium killed
steel which has been deoxidized with aluminium sufficient to prevent the evolution of gas during solidification

3.4
annealing
process of heating to, and holding at, a suitable temperature and then cooling at a suitable rate for such purposes as lowering hardness, facilitating cold working, producing a desired microstructure or obtaining desired mechanical, physical, or other properties

3.5
temper
designation by number or term to indicate the hardness as a minimum, as a maximum, or as a range

Note 1 to entry: The tempers are obtained by the selection and control of chemical composition by amounts of *cold reduction* (3.2), by thermal treatment, and by a skin pass.

3.6
dead soft
condition describing annealed strip produced without definite control of stretcher strains or fluting

Note 1 to entry: It is suitable for drawing and other applications where such surface characteristics are not objectionable.

3.7
surface finish
degree of smoothness or lustre of the strip

3.8
skin pass
light cold rolling of the product resulting in an increase in hardness and some loss in ductility

Note 1 to entry: The purpose of skin passing is to minimize the appearance of coil breaks, stretcher strains and fluting, or to control the shape, or to obtain the required *surface finish* (3.7).

3.9
lot
sample portion consisting of 50 t or less of strip of the same designation rolled to the same thickness and *temper* (3.5) or mechanical properties

4 Dimensions

This product is commonly produced in thicknesses of 6 mm and under, and in widths of up to 600 mm, in coils and cut lengths.

5 Chemical composition

5.1 General

The chemical composition (heat analysis) shall not exceed the values given in Tables 1 and 2.

5.2 Heat analysis

An analysis of each heat of steel shall be made by the manufacturer to determine compliance with the requirements of Tables 1 and 2. When requested at the time of ordering, this analysis shall be reported to the purchaser or his representative.

5.3 Product analysis

A product analysis can be made by the purchaser to verify the specified analysis of the product and shall take into consideration any normal heterogeneity.

The product analysis tolerances shall be in accordance with Tables 2 and 3.

Table 1 — Chemical composition (heat analysis)

Mass fractions in per cent

Temper or quality designation	Carbon (C) max.	Manganese (Mn) max.	Phosphorus (P) max.	Sulfur (S) max.
Temper No. 1, 2, 3	0,25	0,60	0,035	0,04
Temper No. 4, 5	0,15	0,60	0,035	0,04
CR21	0,15	0,60	0,05	0,035
CR22	0,10	0,50	0,04	0,035
CR23	0,08	0,45	0,03	0,03
CR24	0,06	0,45	0,03	0,03

Table 2 — Limits on additional chemical elements[a]

Mass fractions in per cent

Element	Heat analysis max.	Product analysis max.
Cu[b]	0,20	0,23
Ni[b]	0,20	0,23
Cr[b c]	0,15	0,19
Mo[b c]	0,06	0,07
Nb[d]	0,008	0,018
V[d]	0,008	0,018
Ti[d]	0,008	0,018

[a] Each of the elements listed in this table shall be included in the report of the heat analysis. When the amount of copper, nickel, chromium, or molybdenum present is less than 0,02 %, the analysis can be reported as "<0,02 %".

[b] The sum of copper, nickel, chromium, and molybdenum shall not exceed 0,50 % on heat analysis. When one or more of these elements are specified, the sum does not apply; in which case, only the individual limits on the remaining elements will apply.

[c] The sum of chromium and molybdenum shall not exceed 0,16 % on heat analysis. When one or more of these elements are specified, the sum does not apply; in which case, only the individual limits on the remaining elements will apply.

[d] A heat analysis greater than 0,008 % can be supplied after agreement between producer and consumer.

Table 3 — Product analysis tolerances

Mass fractions in per cent

Element	Range of specified element	Tolerance over maximum specified
Carbon	≥0,06 to ≤0,15	0,03
	>0,15 to ≤0,25	0,04
Manganese	≤0,60	0,03
Phosphorus	≤0,05	0,01
Sulfur	≤0,04	0,01

NOTE The above maximum tolerance is the allowable excess over the specified requirements not the heat analysis.

6 Conditions of manufacture

6.1 Physical properties

6.1.1 Either temper requirements in accordance with Table 4 or mechanical properties in accordance with Table 5 can be specified as given in this International Standard, but not both, since there is no direct correlation.

6.1.2 Cold-reduced carbon steel strip specified to temper requirements is produced to the following temper designations:

— No. 1 (hard);

— No. 2 (half hard);

— No. 3 (quarter hard);

— No. 4 (skin-passed);

— No. 5 (dead soft).

6.1.3 Cold-reduced carbon steel strip specified to mechanical properties is produced to the following commercial and drawing quality designations:

— CR21 (commercial quality);

— CR22 (drawing quality);

— CR23 (deep drawing quality);

— CR24 (deep drawing quality aluminium killed).

6.2 Steelmaking

Unless otherwise agreed by the interested parties, the processes used in making the steel and in manufacturing cold-reduced carbon strip are left to the discretion of the manufacturer. On request, the purchaser shall be informed of the steelmaking process being used.

Table 4 — Temper and hardness requirements for cold-reduced carbon steel strip

Temper	Thickness *e* mm	Hardness			
		Rockwell B scale HRB	**Rockwell 30T scale** HR30T	**Rockwell 15T scale** HR15T	**Vickers** HV
No. 1	$e \leq 0{,}36$	—	—	88,2 min.	170 min.
(hard)	$0{,}36 < e \leq 1{,}0$	—	73,1 min.	—	170 min.
	$e > 1{,}0$	84 min.	—	—	162 min.
No. 2	$e \leq 0{,}36$	—	—	83,5 to 89,5	125 to 185
(half hard)	$0{,}36 < e \leq 1{,}0$	—	63,5 to 75,8	—	125 to 185
	$e > 1{,}0$	70 to 89	—	—	125 to 185
No. 3	$e \leq 0{,}36$	—	—	80 to 86,6	107 to 150
(quarter hard)	$0{,}36 < e \leq 1{,}0$	—	56,5 to 69,7	—	107 to 150
	$e > 1{,}0$	60 to 80	—	—	107 to 150
No. 4[a]	$e \leq 0{,}36$	—	—	82 max.	116 max.
(skin-passed)	$0{,}36 < e \leq 1{,}0$	—	60 max.	—	116 max.
	$e > 1{,}0$	65 max.	—	—	116 max.
No. 5[a]	$e \leq 0{,}36$	—	—	78,5 max.	100 max.
(dead soft)	$0{,}36 < e \leq 1{,}0$	—	53 max.	—	100 max.
	$e > 1{,}0$	55 max.	—	—	100 max.

[a] Can be ordered with a carbon range of 0,15 % to 0,25 %. In each instance, the maximum hardness requirement is established by agreement.

Table 5 — Mechanical property requirements for cold-reduced carbon steel strip[a]

Quality designation	Condition of delivery[b]	R_e max.[c] MPa	R_m[d] MPa	A min. %	
				L_o = 80 mm[e]	L_o = 50 mm
CR21	HK[f]	—	—	—	—
	TC	—	410 max.	28	32
	HK270	—	410 max.	28	32
	HK290	—	290 to 430	18	24
	HK390	—	390 to 540	—	—
	HK490	—	490 to 640	—	—
	HK590	—	590 to 740	—	—
	HK690	—	690 min.	—	—
CR22	TC	—	370 max.	32	35
	HK270	250	370 max.	32	35
	HK290	355	290 to 410	21	25
	HK390	—	390 to 510	5	13
	HK490	—	490 to 620	—	—
	HK590	—	590 min.	—	—
CR23	TC	—	350 max.	36	38
	HK270	225 [g]	350 max.	36	38
	HK290	325	290 to 390	23	27
	HK390	—	390 to 490	6	14
	HK490	—	490 to 600	—	—
	HK590	—	590 min.	—	—
CR24	TC	—	350 max.	36	38
	HK270	225 [g]	350 max.	36	38
	HK290	325	290 to 390	23	27
	HK390	—	390 to 490	6	14
	HK490	—	490 to 590	—	—
	HK590	—	590 to 690	—	—

[a] Longitudinal test pieces:

R_e yield strength;

R_m tensile strength;

A percentage elongation after fracture;

L_o gauge length on test piece.

[b] Conditions of delivery: HK, cold-reduced; TC, annealed; HK270, skin-passed; HK290 to HK690, cold-reduced, various amounts.

[c] For thicknesses of 0,7 mm and less, the specified maximum yield strength values are increased by 20 MPa.

[d] Minimum tensile strength values for delivery conditions HK, TC and HK270 would normally be expected to be 270 MPa.

[e] Minimum elongation values are reduced by 2 % for thicknesses of 0,5 mm to 0,7 mm inclusive and by 4 % for thicknesses of less than 0,5 mm.

[f] There are no mechanical property requirements for this condition.

[g] For thicknesses of 1,5 mm and greater, the maximum yield strength is 235 MPa.

6.3 Weldability

This product is suitable for welding if appropriate welding conditions are selected. As carbon content increases above 0,15 %, spot welding becomes increasingly difficult.

6.4 Application

It is desirable that cold-reduced carbon steel strip be identified for fabrication by the name of the part or by intended application, which shall be compatible with the temper or mechanical properties specified. Proper identification of the part might include visual examination, prints or description, or a combination of these.

6.5 Mechanical properties

6.5.1 Hardness

When the temper designation is specified at the time the steel is made available for shipment, the hardness shall be as stated in Table 4 when it is determined on test pieces obtained in accordance with the requirements of Clause 7.

6.5.2 Tensile properties

When the mechanical property designation is specified at the time the steel is made available for shipment, the tensile properties shall be as stated in Table 5 when they are determined on test pieces obtained in accordance with the requirements of Clause 8.

6.6 Oiling

As a deterrent to rusting, a coating of oil is usually applied to the product. The oil is not intended as a drawing or forming lubricant and should be easily removable with degreasing chemicals. The product can be ordered not oiled, if required, in which case the supplier has limited responsibility if oxidation occurs.

6.7 Edges

The desired edge number shall be specified as follows:

a) **No. 1 edge**: a prepared edge of specified contour (round or square) that is produced when a very accurate width is required or when an edge condition suitable for electroplating is required, or both;

b) **No. 2 edge**: a natural mill edge carried through cold rolling from the hot-rolled carbon steel strip without additional processing of the edge;

c) **No. 3 edge**: an approximately square edge, produced by slitting, on which the burr is not eliminated; normal coiling or piling does not necessarily provide a definite positioning of the slitting burr;

d) **No. 4 edge**: a rounded edge produced by edge rolling either the natural edge of hot-rolled carbon steel strip or slit-edge material; this edge is produced when the width tolerances and edge condition are not as exacting as for the No. 1 edge;

e) **No. 5 edge**: an approximately square edge produced from slit-edge material on which the burr is eliminated, usually by rolling or filing;

f) **No. 6 edge**: a square edge produced by edge rolling the natural edge of hot-rolled carbon steel strip or slit-edge material; this edge is produced when the width tolerance and edge condition are not as exacting as for the No. 1 edge.

6.8 Surface finish

The finish is specified normally as one of the following:

a) **No. 1 or matte (dull) finish**: a finish without lustre, produced by rolling on rolls toughened by mechanical, electrical, or chemical means; this finish is especially suitable for lacquer or paint adhesion, and is beneficial in aiding drawing operations by reducing the contact friction between the die and the strip;

b) **No. 2 or regular bright finish**: a finish produced by rolling on rolls having a moderately smooth finish; it is suitable for many requirements, but not generally applicable to bright plating;

c) **No. 3 or best bright finish**: a finish generally of high lustre, produced by selective rolling practices, including the use of specially prepared rolls; this is a high quality finish and is particularly suited for bright plating; the production of this finish requires extreme care in processing and extensive inspection;

d) **No. 4 or mirror finish**: a finish of special high lustre, produced on specially polished rolls, mainly for highly decorative plating purposes; the production of this finish requires extreme care in processing and extensive inspection.

7 Dimensional and shape tolerances

Dimensional and shape tolerances applicable to cold-reduced carbon steel strip shall be as given in Tables 6 to 11 inclusive. When required, special tolerances shall be as agreed between the manufacturer and the purchaser.

The tolerances on flatness for cut-to-length cold-reduced carbon steel strip shall be a maximum of 10 mm in any 1 000 mm of length. Any further requirements for flatness shall be agreed between the manufacturer and purchaser at the time of ordering. The tolerance on flatness is taken to be the greatest difference between the cut length resting on a plane horizontal base and a measuring rule laid in the direction of the longitudinal axis.

Table 6 — Thickness tolerances for cold-reduced carbon steel strip ordered to nominal thickness — Coils and cut lengths

Values in millimetres

Specified thickness E	**Tolerance**[a]					
	$b \leq 125$		$125 < b \leq 250$		$250 < b \leq 600$	
	N	R	N	R	N	R
≤ 0,15	±0,01	±0,01	±0,02	±0,015	—	—
$0,15 < e \leq 0,25$	±0,02	±0,015	±0,02	±0,015	—	—
$0,25 < e \leq 0,40$	±0,02	±0,015	±0,03	±0,02	±0,03	±0,02
$0,40 < e \leq 0,60$	±0,03	±0,02	±0,03	±0,02	±0,04	±0,03
$0,60 < e \leq 0,80$	±0,04	±0,03	±0,04	±0,03	±0,05	±0,035
$0,80 < e \leq 1,00$	±0,04	±0,03	±0,05	±0,035	±0,05	±0,035
$1,00 < e \leq 1,50$	±0,05	±0,035	±0,06	±0,045	±0,07	±0,055
$1,50 < e \leq 2,50$	±0,06	±0,04	±0,07	±0,055	±0,08	±0,06

[a] b indicates the specified width; N indicates normal tolerances; R indicates restrictive tolerances.

NOTE Thickness is measured at any point on the strip not less than 20 mm from a side edge for mill edge strip and not less than 10 mm from a side edge for sheared edge strip. For widths of mill edge strip 40 mm wide or less and sheared edge strip 20 mm wide or less, measurements are made on the centre-line of the strip. Measurement shall not be made on top of the shear burr.

Table 6 *(continued)*

Specified thickness *E*	Tolerance[a]					
	$b \leq 125$		$125 < b \leq 250$		$250 < b \leq 600$	
	N	R	N	R	N	R
$2{,}50 < e \leq 4{,}00$	±0,07	±0,05	±0,08	±0,06	±0,10	±0,08
$4{,}00 < e \leq 6{,}00$	±0,09	±0,06	±0,10	±0,08	±0,12	±0,09

[a] *b* indicates the specified width; N indicates normal tolerances; R indicates restrictive tolerances.

NOTE Thickness is measured at any point on the strip not less than 20 mm from a side edge for mill edge strip and not less than 10 mm from a side edge for sheared edge strip. For widths of mill edge strip 40 mm wide or less and sheared edge strip 20 mm wide or less, measurements are made on the centre-line of the strip. Measurement shall not be made on top of the shear burr.

Table 7 — Width tolerances for edges No. 1, 4, 5, and 6 for cold-reduced carbon steel strip

Values in millimetres

Edge No.	Specified width *b*	Specified thickness		Width tolerance
		min.	max.	
1	$b \leq 200$	—	3,0	±0,13
4	$b \leq 25$	0,6	5,0	±0,38
	$25 < b \leq 50$	0,6	6,0	±0,65
	$50 < b \leq 150$	1,0	6,0	±1,20
5	$b \leq 100$	—	3,0	±0,13
	$100 < b \leq 500$	0,4	3,0	±0,25
	$500 < b \leq 600$	0,6	2,0	±0,38
6	$b \leq 25$	0,6	5,0	±0,38
	$25 < b \leq 50$	0,6	6,0	±0,65
	$50 < b \leq 150$	1,0	6,0	±1,20

Table 8 — Width tolerance for edge No. 2 (mill) for cold-reduced carbon steel strip

Values in millimetres

Specified width *b*	Width tolerance[a]
$b \leq 100$	±1,5
$100 < b \leq 200$	±2,0
$200 < b \leq 400$	±2,5
$400 < b \leq 500$	±3,0
$500 < b \leq 600$	±4,0

[a] The values specified do not apply to the uncropped ends of a mill edge coil within 7 m inclusive of either end.

Table 9 — Width tolerances for edge No. 3 (slit) for cold-reduced carbon steel strip

Values in millimetres

Specified width b	Width tolerance for specified thickness e			
	$e \leq 1{,}5$	$1{,}5 < e \leq 2{,}5$	$2{,}5 < e \leq 4{,}5$	$4{,}5 < e \leq 6{,}0$
$b \leq 100$	±0,20	±0,25	±0,35	±0,40
$100 < b \leq 200$	±0,25	±0,30	±0,45	±0,50
$200 < b \leq 300$	±0,30	±0,35	±0,50	±0,50
$300 < b \leq 450$	±0,40	±0,45	±0,60	±0,70
$450 < b \leq 600$	±0,50	±0,50	±0,60	±0,70

Table 10 — Length tolerances for cold-reduced carbon steel strip

Values in millimetres

Specified width b	Tolerance for specified length l		
	$600 \leq l \leq 1\,500$	$1\,500 < l \leq 3\,000$	$l > 3\,000$
$b \leq 300$	$^{+10}_{0}$	$^{+15}_{0}$	$^{+20}_{0}$
$300 < b \leq 600$	$^{+15}_{0}$	$^{+20}_{0}$	$^{+25}_{0}$

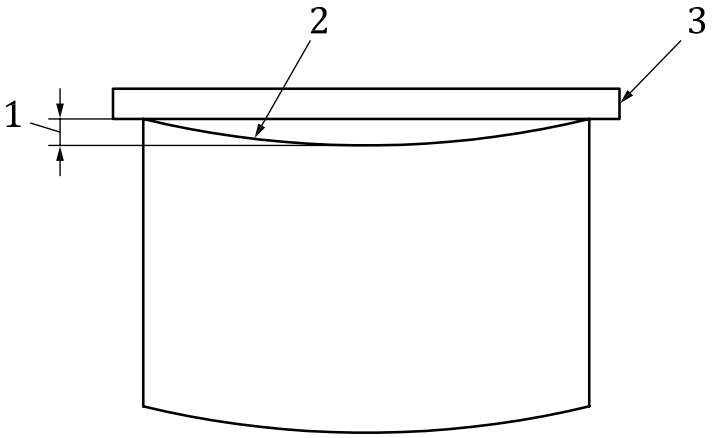
Table 11 — Camber[a] tolerances for cold-reduced carbon steel strip, for coils and cut lengths, applicable to all types of edges

Values in millimetres

Width b	Camber tolerance[b]
$10 < b \leq 40$	25 max. in any 2 000 mm length
$40 < b \leq 600$	10 max. in any 2 000 mm length

[a] Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with a straight-edge, as shown in Figure 1.

[b] The values do not apply to the uncropped ends of a mill edge coil within 7 m inclusive of either end.



Key

1 edge camber
2 side edge (concave side)
3 straight-edge

Figure 1 — Measurement of camber

NOTE In those cases where it is not practicable to measure the tolerance as given in Table 11, the camber tolerance, t_2, can be calculated from Formula (1):

$$t_2 = (l_2/l_1)2 \times t_1 \quad (1)$$

where

l_1 is the standard length in Table 11 (2 000 mm);

l_2 is the non-standard length;

t_1 is the camber tolerance in Table 11.

8 Sampling — Hardness or tensile test

One representative sample for the hardness test (Table 4) or tensile test (Table 5) shall be taken from each lot of strip for shipment.

9 Mechanical property tests

9.1 Hardness test

The hardness test shall be carried out in accordance with ISO 6507-1 or ISO 6508-1, as applicable.

9.2 Tensile test

The tensile test shall be carried out in accordance with ISO 6892-1.

10 Retests

10.1 Machining and flaws

If any test piece shows defective machining or develops flaws, it shall be discarded and another test piece substituted.

10.2 Additional tests

If a test does not give the specified results, two additional tests shall be carried out on the same lot. Both retests shall conform to the requirements of this International Standard; otherwise, the lot shall be rejected.

11 Resubmission

The manufacturer can resubmit for acceptance the products that have been rejected during earlier inspection because of unsatisfactory properties, after he has subjected them to a suitable treatment (for example: selection, heat treatment), which, on request, will be indicated to the purchaser. In this case, tests shall be carried out as if they applied to a new batch.

The manufacturer has the right to present the rejected products to a new examination for compliance with the requirements for another temper, quality designation, edge or finish.

12 Workmanship

The surface condition shall be that normally obtained in this product, as specified in 6.8.

The material in cut lengths shall be free from any lamination, surface flaws and other imperfections that are detrimental to the final product or to subsequent appropriate processing.

Processing for shipment in coils does not afford the manufacturer the opportunity to readily observe or to remove imperfect portions, as can be carried out on the cut length product.

13 Inspection and acceptance

While not usually required for products covered by this International Standard, when the purchaser specifies that inspection and tests for acceptance be observed prior to shipment from the manufacturer's works, the manufacturer shall afford the purchaser's inspector all reasonable facilities to determine that the steel is being furnished in accordance with this International Standard.

Steel that is reported to be defective after arrival at the user's works shall be set aside properly, correctly identified, and adequately protected. The supplier shall be notified in order that he can properly investigate.

14 Coil size

When the product is ordered in coils, a minimum inside diameter (ID) or range of acceptable inside diameters shall be specified. In addition, the maximum outside diameter (OD) and the maximum acceptable coil mass shall be specified.

15 Marking

Unless otherwise stated, the following minimum requirements for identifying the steel shall be legibly stencilled on the top of each lift or shown on a tag attached to each coil or shipping unit:

a) manufacturer's name or identifying brand;

b) reference to this International Standard, i.e. ISO 6932;

c) quality designation or temper;

d) type of edge;

e) type of finish;

f) order number;

g) product dimensions;

h) lot number;

i) mass.

16 Information to be supplied by the purchaser

To specify adequately the requirements of this International Standard, enquiries and orders shall include the following information:

a) reference to this International Standard, i.e. ISO 6932;

b) name, quality and temper or mechanical property designation (see 6.1 and Tables 4 and 5);

c) type of edge (see 6.7);

d) type of finish (see 6.8);

e) dimensions of the product and quantity required;

f) application (name of part), if possible (see 6.4);

g) a report of the heat analysis, if required (see 5.2);

h) limitations on mass and dimensions of individual coils or bundles, if applicable (see Clause 14);

i) inspection and tests, if any, required for acceptance prior to shipment from the manufacturer's works (see Clause 13);

j) steelmaking process (see 6.2);

k) N or R tolerances (see Table 6).

NOTE Typical ordering descriptions are given in Examples 1 and 2 below.

EXAMPLE 1 ISO 6932:2014 cold-reduced carbon steel strip, CR21 TC, No. 3 edge, No. 1 finish, 1,30 mm × 66,5 mm × 1 500 mm, 10 000 kg, to be used for cruise control field plate, oiled, maximum bundle mass 250 kg, maximum lift mass 1 000 kg, N thickness tolerance.

EXAMPLE 2 ISO 6932:2014 cold-reduced carbon steel strip, aluminium killed, No. 4 temper, No. 3 edge, No. 1 finish, 1,90 mm × 92 mm × coil, 6 000 kg, to be used for hinge strap, coils 400 mm minimum ID 1 500 mm maximum OD, maximum lift mass 1 200 kg, R thickness tolerance.

Bibliography

[1] ISO 3574, *Cold-reduced carbon steel sheet of commercial and drawing qualities*

[2] ISO 4960, *Cold-reduced carbon steel strip with a mass fraction of carbon over 0,25 %*

[3] ASTM A109/A109M,[1)]*Standard Specification for Steel Strip, Carbon (0.25 Maximum Percent), Cold-Rolled*

[4] JIS G3141,*Cold-reduced carbon steel sheets and strips*

[5] IS 513, *Cold-rolled low carbon steel sheets and strips*

1) This document is recognized by ISO/TC17/SC12 to cover a subject similar to that of this International Standard. This information is given for the convenience of users of this International Standard and constitutes neither an endorsement of the document by TC17/SC12 or ISO, nor a statement regarding its degree of equivalence with this International Standard.

ICS 77.140.50

Price based on 14 pages