Designation: B122/B122M – 16

Standard Specification for Copper-Nickel-Tin Alloy, Copper-Nickel-Zinc Alloy (Nickel Silver), and Copper-Nickel Alloy Plate, Sheet, Strip, and Rolled Bar[1]

This standard is issued under the fixed designation B122/B122M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This specification establishes the requirements for copper-nickel-tin alloy, copper-nickel-zinc alloy (nickel silver), and copper-nickel alloy plate, sheet, strip, and rolled bar. The following alloys are covered:

Copper Alloy UNS No.[2]	Previously Used Designation	Nominal Composition, %				
		Copper	Nickel	Zinc	Tin	Chromium
C70600	...	90	10	...	...	...
C70620	...	90	10	...	...	...
C71000	6	80	20	...	...	...
C71500	5	70	30	...	...	...
C71520	...	70	30	...	...	...
C72200	...	85	15	...	...	0.5
C72500	...	89	9	...	2	...
C73500	1	72	18	10	...	...
C74000	9	70	10	20	...	...
C74500	3	65	10	25	...	...
C75200	2	65	18	17	...	...
C76200	8	59	12	29	...	...
C77000	4	55	18	27	...	...

NOTE 1—Plates of copper-nickel alloy Copper Alloy UNS Nos. C70600, C70620, C71500, C71520, and C72200 for use as tube plates in surface condensers and heat exchangers are covered by Specification B171/B171M.

1.2 *Units*—The values stated in either inch-pound units or SI units are to be regarded separately as standard. Within the text, SI units are shown in brackets. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

2. Referenced Documents

2.1 *ASTM Standards:*[3]

B171/B171M Specification for Copper-Alloy Plate and Sheet for Pressure Vessels, Condensers, and Heat Exchangers

B248 Specification for General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar

B248M Specification for General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar (Metric)

B601 Classification for Temper Designations for Copper and Copper Alloys—Wrought and Cast

B846 Terminology for Copper and Copper Alloys

E8/E8M Test Methods for Tension Testing of Metallic Materials

E112 Test Methods for Determining Average Grain Size

E255 Practice for Sampling Copper and Copper Alloys for the Determination of Chemical Composition

E478 Test Methods for Chemical Analysis of Copper Alloys

E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

3. General Requirements

3.1 The following sections of Specifications B248 or B248M constitute a part of this specification:

3.1.1 Terminology
3.1.2 Materials and Manufacture
3.1.3 Workmanship, Finish, and Appearance
3.1.4 Sampling—except for chemical analysis
3.1.5 Number of Tests and Retests
3.1.6 Specimen Preparation
3.1.7 Test Methods
3.1.8 Significance of Numerical Limits
3.1.9 Inspection

[1] This specification is under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.01 on Plate, Sheet, and Strip.

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[2] The UNS system for copper and copper alloys (see Practice E527) is a simple expansion of the former standard designation system accomplished by the addition of a prefix "C" and a suffix "00." The suffix can be used to accommodate composition variations of the base alloy.

[3] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

***A Summary of Changes section appears at the end of this standard**

3.1.10 Rejection and Rehearing
3.1.11 Certification
3.1.12 Test Report
3.1.13 Packaging and Package Marking
3.1.14 Supplementary Requirements

3.2 In addition, when a section with a title identical to that referenced in 3.1, above, appears in this specification, it contains additional requirements, which supplement those appearing in Specifications B248 or B248M.

4. Terminology

4.1 For definitions of terms related to copper and copper alloys, refer to Terminology B846.

5. Ordering Information

5.1 Include the following specified choices when placing orders for product under this specification, as applicable:
5.1.1 ASTM designation and year of issue,
5.1.2 Copper [Alloy] UNS No. designation,
5.1.3 Temper (Section 8),
5.1.4 Dimensions, thickness and width (Section 11),
5.1.5 How furnished: straight lengths or coils,
5.1.6 Quantity—Total weight or total length or number of pieces of each size.
5.1.7 Type of edge, if required (slit, sheared, sawed, square corners, round corners, rounded edges, or full rounded edges),
5.1.8 Length (Section 11), and
5.1.9 Intended application.

5.2 The following options are available but may not be included unless specified at the time of placing the order when required:
5.2.1 Heat identification or traceability details,
5.2.2 Certification,
5.2.3 Test Report,
5.2.4 If product is purchased for agencies of the U.S. government (see the Supplementary Requirements of Specifications B248 or B248M for additional requirements).

6. Materials and Manufacture

6.1 *Materials:*

6.1.1 The material of manufacture shall be a form (cast bar, cake, slab, et cetera) of Copper Alloy UNS No. C70600, C70620, C71000, C71500, C71520, C72200, C72500, C73500, C74000, C74500, C75200, C76200, or C77000 of such purity and soundness as to be suitable for processing into the products prescribed herein.

6.1.2 When specified in the contract or purchase order that heat identification or traceability is required, the purchaser shall specify the details desired.

NOTE 2—Due to the discontinuous nature of the processing of castings into wrought products, it is not always practical to identify a specific casting analysis with a specific quantity of finished material.

6.2 *Manufacture:*

6.2.1 The product shall be manufactured by such hot-working, cold-working, and annealing processes as to produce a uniform wrought structure in the finished product.

6.2.2 The product shall be hot or cold worked to the finished size and subsequently annealed, when required, to meet the temper properties specified.

6.3 *Edges:*

6.3.1 Slit edges shall be furnished unless otherwise specified in the contract or purchase order.

7. Chemical Composition

7.1 The material shall conform to the chemical composition requirements in Table 1 for the copper [alloy] UNS No. designation specified in the ordering information.

7.2 These composition limits do not preclude the presence of other elements. By agreement between the manufacturer and purchaser, limits may be established and analysis required for unnamed elements.

7.3 For alloys in which copper is listed as "remainder," copper is the difference between the sum of results of all

TABLE 1 Chemical Requirements

Copper Alloy UNS No.	Composition, %								
	Copper, incl Silver	Nickel, incl Cobalt	Lead, max	Iron, max	Manganese, max	Zinc	Tin	Chro-mium	Other Named Elements
C70600	remainder	9.0–11.0[A]	0.05[B]	1.0–1.8	1.0	1.0[B] max	...	...	[B]
C70620	86.5 min	9.0–11.0	0.02	1.0–1.8	1.0	0.50 max	...	...	[C]
C71000	remainder	19.0–23.0	0.05[B]	1.0 max	1.0	1.0[B] max	...	...	[B]
C71500	remainder	29.0–33.0[A]	0.05[B]	0.40–1.0	1.0	1.0[B] max	...	...	[B]
C71520	65.0 min	29.0–33.0	0.02	0.40–1.0	1.0	0.50 max	...	...	[C]
C72200	remainder	15.0–18.0	0.05[B]	0.50–1.0	1.0	1.0[B]	...	0.30–0.7	[B, D]
C72500	remainder	8.5–10.5	0.05	0.6	0.20	0.50 max	1.8–2.8	...	...
C73500	70.5–73.5	16.5–19.5	0.09	0.25 max	0.50	remainder	...	...	...
C74000	69.0–73.5	9.0–11.0	0.05	0.25 max	0.50	remainder	...	...	...
C74500	63.5–66.5	9.0–11.0	0.09	0.25 max	0.50	remainder	...	...	...
C75200	63.0–66.5	16.5–19.5	0.05	0.25 max	0.50	remainder	...	...	...
C76200	57.0–61.0	11.0–13.5	0.09	0.25 max	0.50	remainder	...	...	...
C77000	53.5–56.5	16.5–19.5	0.05	0.25 max	0.50	remainder	...	...	...

[A] Copper plus elements with specific limits, 99.5 % min.
[B] When the product is for subsequent welding applications and so specified by the purchaser, zinc shall be 0.50 % max, lead 0.02 % max, phosphorus 0.02 % max, sulfur 0.02 % max, and carbon 0.05 % max.
[C] Phosphorus at 0.02 % max, sulfur at 0.02 % max, and carbon at 0.05 % max.
[D] Silicon and titanium each at 0.03 % max.

elements determined and 100 %. When all elements in Table 1 are determined, the sum of results shall be as shown in the following table:

Copper Alloy UNS No.	Copper Plus Named Elements, % min
C70600	99.5
C70620	99.5
C71000	99.5
C71500	99.5
C71520	99.5
C72200	99.8
C72500	99.8

7.4 For alloys in which zinc is listed as "remainder," either copper or zinc may be taken as the difference between the sum of results of all other elements determined and 100 %. When all elements in Table 1 are determined, the sum of the results shall be as shown in the following table:

Copper Alloy UNS No.	Copper Plus Named Elements, % min
C73500	99.5
C74000	99.5
C74500	99.5
C75200	99.5
C76200	99.5
C77000	99.5

8. Temper

8.1 The standard tempers for products described in this specification are given in Tables 2 and 3.

8.1.1 Hot rolled temper M20.

8.1.2 Cold rolled tempers H01 to H14.

8.1.3 Annealed tempers OS015 to OS070.

9. Grain Size for Annealed Tempers

9.1 Grain size shall be the standard requirement for all product in the annealed tempers.

9.2 Acceptance or rejection based upon grain size shall depend only on the average grain size of a test specimen taken from each of two sample portions, and each specimen shall be within the limits prescribed in Table 3 when determined in accordance with Test Methods E112.

9.3 Grain size shall be determined on a plane parallel to the flat surfaces of the product.

10. Mechanical Property Requirements

10.1 *Tensile Strength Requirements:*

10.1.1 Product furnished under this specification shall conform to the tensile requirements prescribed in Table 2 when tested in accordance with Test Methods E8/E8M.

10.1.2 Acceptance or rejection based on mechanical properties shall depend only on tensile strength.

10.1.3 The tension test specimens shall be taken so the longitudinal axis of the specimens is parallel to the direction of rolling.

10.2 *Rockwell Hardness:*

10.2.1 The approximate Rockwell hardness values given in Tables 2 and 4 are for general information and assistance in testing, and shall not be used as a basis for product rejection.

NOTE 3—The Rockwell hardness test offers a quick and convenient method of checking for general conformity to the specification requirements for temper, tensile strength, and grain size.

11. Dimensions, Mass, and Permissible Variation

11.1 The dimensions and tolerances for product described by this specification shall be as specified in Specifications B248 and B248M.

11.2 *Thickness*—When special thickness tolerances for Copper Alloy UNS No. C72500 are required, see appropriate table.

11.3 *Width:*

11.3.1 *Slit Metal and Slit Metal with Rolled Edges.*

11.3.2 *Square Sheared Metal.*

11.3.3 *Sawed Metal.*

11.4 *Length:*

11.4.1 *Specific and Stock Lengths With and Without Ends.*

11.4.2 *Schedule of Lengths (Specific and Stock) with Ends.*

11.4.3 *Length Tolerance for Square Sheared Metal.*

11.4.4 *Length Tolerance for Sawed Metal.*

11.5 *Straightness:*

11.5.1 *Slit Metal or Slit Metal Either Straightened or Edge Rolled.*

11.5.2 *Square Sheared Metal.*

11.5.3 *Sawed Metal.*

11.6 *Edges Contours:*

11.6.1 *Square Corners.*

11.6.2 *Rounded Corners.*

11.6.3 *Rounded Edges.*

11.6.4 *Full-Rounded Edges.*

12. Workmanship, Finish, and Appearance

12.1 The product shall be free of defects, but blemishes of a nature that do not interfere with the intended application are acceptable.

13. Sampling

13.1 Refer to sampling section in Specifications B248 or B248M.

13.2 *Chemical Analysis:*

13.2.1 The sample for chemical analysis shall be taken from the pieces selected and combined into one composite sample in accordance with Practice E255 for product in its final form. The minimum weight of the composite sample shall be 150 g.

13.2.2 Instead of sampling as directed in 13.2.1, the manufacturer shall have the option of sampling at the time castings are poured or from the semi finished product. The number of samples taken for the determination of composition shall be as follows:

13.2.2.1 When samples are taken at the time the castings are poured, at least one sample shall be taken for each group of castings poured from the same source of molten metal.

13.2.2.2 When samples are taken from semi finished product, a sample shall be taken to represent each 10 000 lb [5000 kg] or fraction thereof, except that not more than one sample shall be required per piece.

13.2.2.3 Only one sample need be taken from the semi finished product of one cast bar from a single melt charge continuously processed.

TABLE 2 Tensile Strength Requirements and Approximate Rockwell Hardness Values for Rolled Temper Product

NOTE 1—Plate is generally available in only the as hot–rolled (M20) tempers. Required properties for other tempers shall be agreed upon between manufacturer and purchaser at the time of placing the order.

Temper Designation		Tensile Strength, ksi[A] [MPa[B]]		Approximate Rockwell Hardness[C, D]		
Code	Name	Min	Max	G Scale	B Scale	Superficial 30-T
		Copper Alloy UNS No. C70600 and C70620				
M20	as hot-rolled	40 [275]	62 [425]	...	...	...
H01	quarter hard	51 [350]	67 [460]	...	51–78	52–70
H02	half hard	58 [400]	72 [495]	...	66–81	61–72
H04	hard	71 [490]	83 [570]	...	76–86	67–74
H06	extra hard	73 [505]	85 [585]	...	80–88	71–77
H08	spring	78 [540]	88 [605]	...	83–91	72–78
		Copper Alloy UNS No. C71000				
M20	as hot-rolled	38 [260]	56 [385]	...	...	...
H01	quarter hard	47 [325]	63 [435]	...	45–72	46–65
H02	half hard	56 [385]	70 [485]	...	64–78	59–69
H04	hard	67 [460]	79 [545]	...	76–84	67–73
H06	extra hard	72 [495]	84 [580]	...	79–87	69–75
H08	spring	76 [525]	87 [600]	...	82–88	71–75
		Copper Alloy UNS No. C71500 and C71520				
M20	as hot-rolled	45 [310]	65 [450]	...	...	...
H01	quarter hard	58 [400]	72 [495]	...	67–81	61–71
H02	half hard	66 [455]	80 [550]	...	76–85	67–74
H04	hard	75 [515]	88 [605]	...	83–89	72–76
H06	extra hard	80 [550]	92 [635]	...	85–91	73–77
H08	spring	84 [580]	94 [650]	...	87–91	74–77
		Copper Alloy UNS No. C72200				
M20	as hot-rolled	42 [290]	62 [425]	...	...	...
H01	quarter hard	55 [380]	67 [460]	...	63–78	58–70
H02	half hard	58 [400]	72 [495]	...	66–85	61–73
H04	hard	71 [490]	85 [585]	...	76–88	67–78
H06	extra hard	73 [505]	90 [620]	...	79–90	69–78
H08	spring	78 [540]	91 [625]	...	81–91	71–79
		Copper Alloy UNS No. C72500				
M20	as hot-rolled	50 [345]	70 [485]	...	...	...
H01	quarter hard	55 [380]	75 [515]	...	Up to 85	Up to 72
H02	half hard	65 [450]	80 [550]	...	70–90	62–75
H04	hard	75 [515]	90 [620]	...	75–90	66–75
H06	extra hard	80 [550]	95 [655]	...	80–95	70–80
H08	spring	85 [585]	100 [690]	...	85–95	72–80
H10	extra spring	90 [620]	105 [725]	...	87–95	76–80
H14	super spring	100 [690]	125 [860]	...	92 and over	78 and over
		Copper Alloy UNS No. C73500				
M20	as hot-rolled	48 [330]	63 [435]	...	...	...
H01	quarter hard	56 [385]	69 [475]	20–47	66–80	60–70
H02	half hard	63 [435]	75 [515]	38–53	75–84	67–73
H04	hard	73 [505]	84 [580]	51–61	83–88	72–75
H06	extra hard	79 [545]	90 [620]	57–65	86–90	74–76
		Copper Alloy UNS No. C74000				
M20	as hot-rolled	48 [330]	63 [435]	...	...	...
H01	quarter hard	55 [380]	70 [485]	...	60–80	...
H02	half hard	63 [435]	77 [530]	...	70–85	...
H04	hard	73 [505]	87 [600]	...	79–91	...
H06	extra hard	79 [545]	91 [625]	...	83–93	...
		Copper Alloy UNS No. C74500				
M20	as hot-rolled	48 [330]	65 [450]	...	...	...
H01	hard	56 [385]	73 [505]	...	51–80	50–70
H02	half hard	67 [460]	82 [565]	...	72–87	65–75
H04	hard	80 [550]	94 [650]	...	85–92	73–78
H06	extra hard	89 [615]	102 [705]	...	90–94	76–79
H08	spring	95 [655]	108 [745]	...	92–96	77–80
		Copper Alloy UNS No. C75200				
M20	as hot-rolled	52 [355]	65 [450]	...	...	...
H01	quarter hard	58 [400]	72 [495]	...	50–75	49–67
H02	half hard	66 [455]	80 [550]	...	68–82	62–72
H04	hard	78 [540]	91 [625]	...	80–90	70–76
H06	extra hard	86 [595]	98 [675]	...	87–94	74–79
H08	spring	90 [620]	101 [695]	...	89–96	75–80
		Copper Alloy UNS No. C76200				
M20	as hot-rolled	55 [380]	75 [515]	...	...	...
H01	quarter hard	65 [450]	81 [560]	...	61–85	57–74
H02	half hard	75 [515]	91 [625]	...	78–91	69–77
H04	hard	90 [620]	105 [750]	...	90–95	76–79
H06	extra hard	99 [685]	114 [785]	...	94–98	79–81

TABLE 2 *Continued*

Temper Designation		Tensile Strength, ksi[A] [MPa[B]]		Approximate Rockwell Hardness[C, D]		
Code	Name	Min	Max	G Scale	B Scale	Superficial 30-T
H08	spring	107 [740]	122 [840]	...	97–100	80 and over
		Copper Alloy UNS No. C77000				
M20	as hot-rolled	60 [415]	80 [550]	...	...	...
H01	quarter hard	69 [475]	87 [600]	23–62	70–88	63–75
H02	half hard	78 [540]	95 [655]	51–69	81–92	71–78
H04	hard	92 [635]	109 [750]	67–76	90–96	76–80
H06	extra hard	102 [705]	117 [805]	73–80	95–99	79–82
H08	spring	108 [745]	123 [850]	77–83	97–100	80 and over

[A] ksi = 1000 psi.
[B] See Appendix X1.
[C] Rockwell hardness values apply as follows: The B and G scale hardness values apply to metal 0.020 in. [0.508 mm] and over in thickness, and the 30-T scale hardness values apply to metal 0.012 in. [0.305 mm] and over in thickness.
[D] Standard designation defined in Classification B601.

TABLE 3 Grain Size Requirements for Annealed (OS) Product

Copper Alloy UNS No.	Standard Temper Designation[A]	Grain Size, mm		
		Nominal	Min	Max
C70600, C70620, C71000, C71500, C71520, C72200, C72500, C73500, and C76200	OS035	0.035	0.025	0.050
	OS015	0.015	[B]	0.025
C74000, C74500, C75200, and C77000	OS070	0.070	0.050	0.100
	OS035	0.035	0.025	0.050
	OS015	0.015	[B]	0.025

[A] Standard designation defined in Classification B601.
[B] Although no minimum grain size is required, this material shall be fully recrystallized.

TABLE 4 Approximate Rockwell Hardness of Annealed Product

Temper		Approximate Rockwell Hardness[A]		
Standard Designation	Nominal Grain Size, mm	B Scale	F Scale	Superficial 30-T
	Copper Alloy UNS No. C70600 and C70620			
OS035	0.035	10–27	55–72	15–34
OS015	0.015	16–48	65–83	25–45
	Copper Alloy UNS No. C71000			
OS035	0.035	18–35	67–76	28–40
OS015	0.015	35–58	76–90	40–55
	Copper Alloy UNS No. C71500 and C71520			
OS035	0.035	23–45	70–85	31–46
OS015	0.015	37–63	74–93	40–58
	Copper Alloy UNS No. C72200			
OS035	0.035	14–31	...	24–36
OS015	0.015	18–42	...	26–41
	Copper Alloy UNS No. C72500			
OS035	0.035	24–39	70–81	32–42
OS015	0.015	37–61	78–92	41–58
	Copper Alloy UNS No. C73500			
OS035	0.035	20–35	70–80	29–40
OS015	0.015	28–55	76–90	34–53
	Copper Alloy UNS No. C74000			
OS070	0.070	5–20	...	...
OS035	0.035	20–40	...	...
OS015	0.015	35–55	...	...
	Copper Alloy UNS No. C74500			
OS070	0.070	15–30	63–73	26–36
OS035	0.035	23–41	70–80	31–44
OS015	0.015	41–59	80–90	44–56
	Copper Alloy UNS No. C75200			
OS070	0.070	25–40	70–80	32–43
OS035	0.035	35–55	75–88	40–53
OS015	0.015	45–70	83–93	46–64
	Copper Alloy UNS No. C76200			
OS035	0.035	20–35	70–80	...
OS015	0.015	28–55	76–90	...
	Copper Alloy UNS No. C77000			
OS070	0.070	29–45	72–83	35–46
OS035	0.035	37–60	76–91	41–57
OS015	0.015	47–73	84–98	47–65

[A] Rockwell hardness values apply as follows: The B and F scale hardness values apply to metal 0.020 in. [0.508 mm] and over in thickness and the 30-T scale hardness values apply to metal 0.015 in. [0.381 mm] and over in thickness.

13.2.2.4 When the material is cast in the horizontal continuous casting mode, at least one sample shall be taken to represent the composition of the holder per cast coil.

13.2.3 When composition of the material has been determined during manufacture, sampling of the finished product by the manufacturer is not required.

14. Test Methods

14.1 *Chemical Analyses:*

14.1.1 In cases of disagreement, test methods for chemical analysis shall be subject to agreement between the manufacturer or supplier and the purchaser. The following table is a list of published methods, some of which my no longer be viable, which along with others not listed, may be used subject to agreement:

Element	ASTM Test Method
Copper	E478
Nickel	E478 (gravimetric)
Chromium	E478 (AA)
Tin	E478 (photometric)
Zinc	E478 (AA)

14.1.2 Test methods(s) to be followed for the determination of element(s) resulting from contractual or purchase order agreement shall be as agreed upon between the manufacturer or supplier and the purchaser.

15. Keywords

15.1 copper-nickel plate; copper-nickel rolled bar; copper-nickel sheet; copper-nickel strip; copper-nickel-tin plate; copper-nickel-tin rolled bar; copper-nickel-tin sheet; copper-nickel-tin strip; copper-nickel-zinc plate; copper-nickel-zinc rolled bar; copper-nickel-zinc sheet; copper-nickel-zinc strip;

UNS No. C70600; UNS No. C70620; UNS No. C71000; UNS No. C71500; UNS No. C71520; UNS No. C72200; UNS No. C72500; UNS No. C73500; UNS No. C74000; UNS No. C74500; UNS No. C75200; UNS No. C76200; UNS No. C77000

APPENDIX

(Nonmandatory Information)

X1. METRIC EQUIVALENTS

X1.1 The SI unit for strength properties now shown is in accordance with the International System of Units (SI). The derived SI unit for force is the newton (N), which is defined as that force which when applied to a body having a mass of one kilogram gives it an acceleration of one metre per second squared ($N = kg \cdot m/s^2$). The derived SI unit for pressure or stress is the newton per square metre (N/m^2), which has been named the pascal (Pa) by the General Conference on Weights and Measures. Since 1 ksi = 6 894 757 Pa, the metric equivalents are expressed as megapascal (MPa), which is the same as MN/m^2 and N/mm^2.

SUMMARY OF CHANGES

Committee B05 has identified the principal changes to this specification that have been incorporated since the 2011 issue as follows:

(1) Made editorial corrections to the standard to ensure it conforms to proper form and style.
(2) Corrected nominal compositions of C70620, C71520, and C74500 in 1.1.
(3) Changed C71520 Ni minimum to 29.0, changed C72200 Cr maximum to 0.7, added note D to C72200, removed note D from C72500, changed C72500 Mn max to 0.20, changed C72500 Zn max to 0.50, and changed C75200 Cu minimum to 63.0. All of these changes were made so the compositions are consistent with CDA.
(4) Changed C74500 H06 max Tensile strength from 700 MPa to 705 MPA to correct this error, and changed C74500 H08 max Tensile strength from 740 MPa to 745 MPa to correct this error.
(5) Changed C75200 H08 max Tensile strength from 700 MPa to 695 MPa to correct this error.
(6) Changed C76200 H04 max Tensile strength from 720 MPa to 725 MPa to correct this error, and changed C76200 H06 max Tensile Strength from 790 MPa to 785 MPa to correct this error.
(7) Changed C77000 H06 max Tensile strength from 810 MPa to 805 MPa to correct this error, changed the H06 min Tensile strength from 700 MPa to 705 MPa, and changed the H08 min Tensile strength from 740 MPa to 745 MPa.