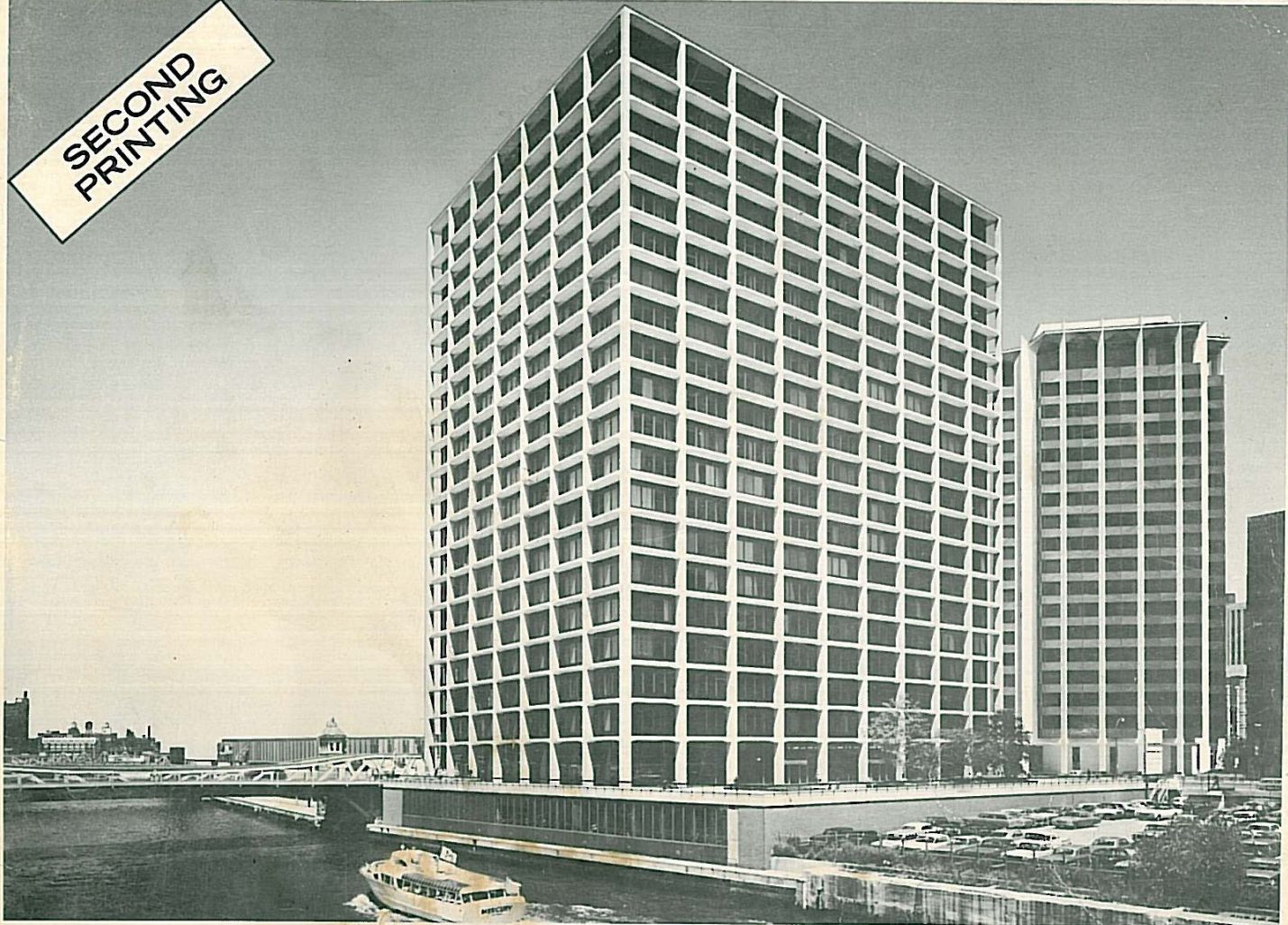


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of standard  
practice

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# CHAPTER 1-REINFORCING BARS AND SPIRALS (Cont.)

## U. S. MANUFACTURERS OF CONCRETE REINFORCING BARS

### IDENTIFICATION OF U.S. REINFORCING BARS

ASTM and AASHTO Specifications require that all reinforcing bars be identified by permanent, mill-imprinted markings. See page 1-22.

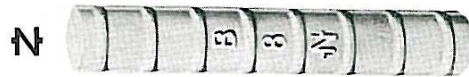
1. Allison Steel Mfg. Co., Rolling Mills Div.  
Phoenix, Arizona
2. Armco Steel Corp.  
Kansas City, Missouri
3. Atlantic Steel Company  
Atlanta, Georgia
4. Bethlehem Steel Corporation  
Bethlehem, Pennsylvania
5. Border Steel Mills, Inc.  
El Paso, Texas
6. Calumet Steel Div., Borg-Warner Corp.  
Chicago Heights, Illinois
7. Ceco Corporation, The  
Chicago, Illinois
8. C F & I Steel Corp.  
Denver, Colorado
9. Connors Works, Connors Steel Div., H. K. Porter Co.  
Birmingham, Alabama
10. Continental Steel Corporation  
Kokomo, Indiana
11. Etiwanda Steel Producers, Inc.  
Etiwanda, California
12. Florida Steel Corporation  
Tampa, Florida
13. Franklin Steel Div., Borg-Warner Corp.  
Franklin, Pa.
14. Great Lakes Steel Corp., Div. of National Steel Corp.  
Detroit, Michigan
15. Hawaiian Western Steel Limited  
Honolulu, Hawaii
16. Hoster Investment Co.  
Oklahoma City, Okla.
17. Industrial Siderurgica, Inc.  
Bayamon, Puerto Rico
18. Inland Steel Company  
Chicago, Illinois
19. Jones & Laughlin Steel Corporation  
Pittsburgh, Pennsylvania
20. Judson Steel Corporation  
Emeryville, California
21. Kaiser Steel Corporation  
Oakland, California

#### 4 BETHLEHEM STEEL CORPORATION



NOTE: DEFORMATIONS OMITTED FOR FIVE BAR MARKS (BLANKS ARE FOR GRADE MARKS)

#### 5 BORDER STEEL MILLS, INC.



#### 6 CALUMET STEEL DIVISION



#### 6 CALUMET STEEL DIVISION



#### 1 ALLISON STEEL MFG. COMPANY



#### 6 CALUMET STEEL DIVISION



#### 2 ARMCO STEEL CORPORATION



#### 7 CECO CORPORATION, THE

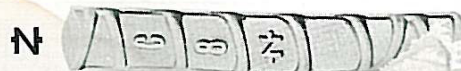


Bars #14S and #18S only

#### 3 ATLANTIC STEEL COMPANY






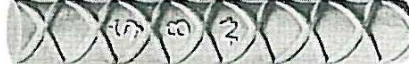

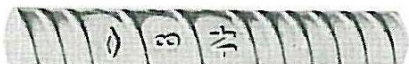










#### 7 CECO CORPORATION, THE



Bars #3 through #11, inc'

CHAPTER 1-REINFORCING BARS AND SPIRALS (Cont.)

<p><b>8</b> CF&amp;I STEEL CORPORATION</p> <p>N </p>	<p><b>15</b> HAWAIIAN WESTERN STEEL LTD.</p> <p>N </p>
<p><b>9</b> CONNORS WORKS CONNORS STEEL DIV., H. K. PORTER CO., INC.</p> <p>N </p>	<p><b>16</b> HOSTER INVESTMENT CO.</p> <p></p> <p>Type not designated</p>
<p><b>10</b> CONTINENTAL STEEL CORPORATION</p> <p>N </p> <p>#3, #4, #5 ONLY</p>	<p><b>17</b> INDUSTRIAL SIDERURGICA, INC.</p> <p>N </p>
<p><b>11</b> ETIWANDA STEEL</p> <p>N </p>	<p><b>18</b> INLAND STEEL COMPANY</p> <p>N </p>
<p><b>12</b> FLORIDA STEEL CORPORATION</p> <p>N </p> <p>One space between marks</p>	<p><b>18</b> INLAND STEEL COMPANY</p> <p>I </p>
<p><b>13</b> FRANKLIN STEEL DIV., BORG-WARNER</p> <p>I </p>	<p><b>19</b> JONES &amp; LAUGHLIN STEEL CORP.</p> <p>N </p>
<p><b>13</b> FRANKLIN STEEL DIV., BORG-WARNER</p> <p>A </p>	<p><b>20</b> JUDSON STEEL CORPORATION</p> <p>N </p>
<p><b>14</b> GREAT LAKES STEEL CORPORATION</p> <p></p>	<p><b>21</b> KAISER STEEL CORPORATION</p> <p>N </p>

# CHAPTER 1—REINFORCING BARS AND SPIRALS (Cont.)

## U. S. MANUFACTURERS OF CONCRETE REINFORCING BARS

### IDENTIFICATION OF U.S. REINFORCING BARS

ASTM and AASHTO Specifications require that all reinforcing bars be identified by permanent, mill-imprinted markings. See page 1-22.

22. Kalmar Steel Corporation  
Magnolia, Arkansas
23. Kankakee Electric Steel Company  
Kankakee, Illinois
24. Laclede Steel Company  
St. Louis, Missouri
25. Lane Star Steel Company  
Dallas, Texas
26. Milton Manufacturing Co., Subsidiary of the Ceco Corporation  
Milton, Pennsylvania
27. Mississippi Steel Corp.  
Jackson, Mississippi
28. Missouri Rolling Mill Corp.  
St. Louis, Missouri
29. North Star Steel Company  
St. Paul, Minnesota
30. Northern Steel, Inc.  
Boston, Massachusetts
31. Northwest Steel Rolling Mills, Inc.  
Seattle, Washington
32. Northwestern Steel & Wire Co.  
Sterling, Illinois
33. Oregon Steel Mills  
Portland, Oregon
34. Owen Electric Steel Co., of So. Carolina  
Cayce, South Carolina
35. Pacific States Steel Corp.  
Union City, California
36. Phoenix Manufacturing Co.  
Joliet, Illinois
37. Pollak Steel Co., The  
Cincinnati, Ohio
38. Republic Steel Corp.  
Cleveland, Ohio
39. Roanoke Electric Steel Corp.  
Roanoke, Virginia
40. Ross Steel Works, Inc.  
Amite, Louisiana
41. Schindler Bros. Steel Co.  
Sealy, Texas
42. Soule Steel Co.  
San Francisco, California

### 24 LACLEDE STEEL COMPANY



### 25 LONE STAR STEEL CORPORATION

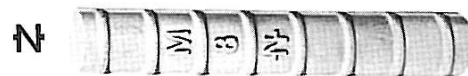


Marks are 7 spaces apart

### 26 MILTON MANUFACTURING CO. SUBSIDIARY OF THE CECO CORPORATION



### 27 MISSISSIPPI STEEL CORPORATION



### 22 KALMAR STEEL CORPORATION



#3, #4, #5 ONLY

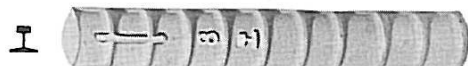
### 28 MISSOURI ROLLING MILL CORP.



### 23 KANKAKEE ELECTRIC STEEL CO.



### 28 MISSOURI ROLLING MILL CORP.



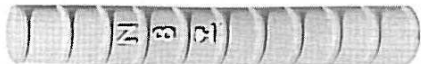

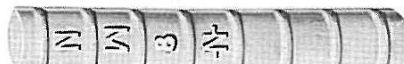




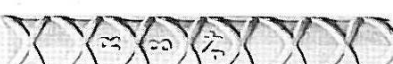
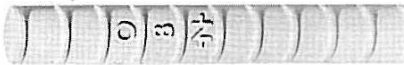



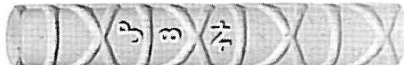



### 24 LACLEDE STEEL COMPANY



### 29 NORTH STAR STEEL COMPANY



CHAPTER 1-REINFORCING BARS AND SPIRALS (Cont.)

<p><b>30</b> NORTHERN STEEL, INCORPORATED</p> <p>I </p>	<p><b>37</b> POLLAK STEEL COMPANY</p> <p>N </p>
<p><b>31</b> NORTHWEST STEEL ROLLING MILLS, INC.</p> <p>N </p>	<p><b>37</b> POLLAK STEEL COMPANY</p> <p>A </p>
<p><b>32</b> NORTHWESTERN STEEL &amp; WIRE CO.</p> <p>N </p>	<p><b>37</b> POLLAK STEEL COMPANY</p> <p>I </p>
<p><b>33</b> OREGON STEEL MILLS</p> <p>N </p>	<p><b>38</b> REPUBLIC STEEL CORPORATION</p> <p>N </p>
<p><b>34</b> OWEN ELECTRIC STEEL COMPANY</p> <p>N </p>	<p><b>39</b> ROANOKE ELECTRIC STEEL CORP.</p> <p>N </p>
<p><b>35</b> PACIFIC STATES STEEL CORPORATION</p> <p>N </p>	<p><b>40</b> ROSS STEEL WORKS, INC.</p> <p>N </p>
<p><b>36</b> PHOENIX MANUFACTURING CO.</p> <p>N </p>	<p><b>41</b> SCHINDLER BROS. STEEL CO.</p> <p>N </p>
<p><b>36</b> PHOENIX MANUFACTURING CO.</p> <p>A </p>	<p><b>42</b> SOULE' STEEL COMPANY</p> <p>N </p>

# CHAPTER 1—REINFORCING BARS AND SPIRALS (Cont.)

## U. S. MANUFACTURERS OF CONCRETE REINFORCING BARS

### IDENTIFICATION OF U.S. REINFORCING BARS

ASTM and AASHTO Specifications require that all reinforcing bars be identified by permanent, mill-imprinted markings. See page 1-22.

- 43. Southern Electric Steel Company  
Division of The Ceco Corporation  
Birmingham, Alabama
- 44. Southwest Steel Rolling Mills  
Los Angeles, California
- 45. Structural Metals, Inc.  
Seguin, Texas
- 46. Tennessee Forging Steel Corporation  
Harriman, Tennessee
- 47. Texas Steel Co.  
Fort Worth, Texas
- 48. United States Steel Corp.  
Pittsburgh, Pennsylvania  
Duquesne Mill  
Torrance Mill  
Birmingham Mill  
Gary Mill  
Fairless Mill  
McDonald Mill  
Duluth Mill
- 49. West Virginia Works, Connors Steel Div.  
H. K. Porter Co., Inc.  
Huntington, West Virginia
- 50. Witteman Steel Mills  
Fontana, California
- 51. Youngstown Sheet & Tube Co., The  
Youngstown, Ohio  
Youngstown Mill  
Chicago Mill

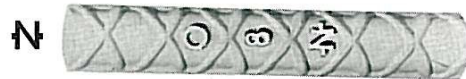
### 46 TENNESSEE FORGING STEEL CORP.



### 47 TEXAS STEEL COMPANY



### 48 U. S. STEEL CORPORATION



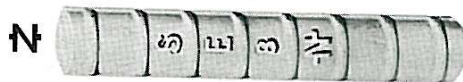
McDonald Mill

### 48 U. S. STEEL CORPORATION



Birmingham Mill

### 43 SOUTHERN ELECTRIC STEEL CO. DIVISION OF THE CECO CORPORATION



### 48 U. S. STEEL CORPORATION



Duluth Mill

### 44 SOUTHWEST STEEL ROLLING MILLS



### 48 U. S. STEEL CORPORATION



Gary Mill


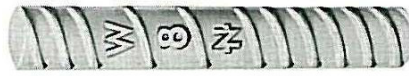




### 45 STRUCTURAL METALS, INCORPORATED



### 48 U. S. STEEL CORPORATION



**CHAPTER 1—REINFORCING BARS AND SPIRALS (Cont.)**

<p><b>48 U. S. STEEL CORPORATION</b></p> <p><b>N</b> </p> <p>Torrance Mill</p>	<p><b>50 WITTEMAN STEEL MILLS</b></p> <p><b>N</b> </p>
<p><b>48 U. S. STEEL CORPORATION</b></p> <p><b>N</b> </p> <p>Duquesne Mill</p>	<p><b>51 YOUNGSTOWN SHEET &amp; TUBE CO.</b></p> <p><b>N</b> </p> <p>Youngstown Mill</p>
<p><b>49 W. VA. WKS., CONNORS STEEL DIV.</b> H. K. PORTER CO., INC.</p> <p><b>N</b> </p>	<p><b>51 YOUNGSTOWN SHEET &amp; TUBE CO.</b></p> <p><b>N</b> </p> <p>Chicago Mill</p>

## CHAPTER 1—U.S. STANDARD BARS—IDENTIFICATION MARKS

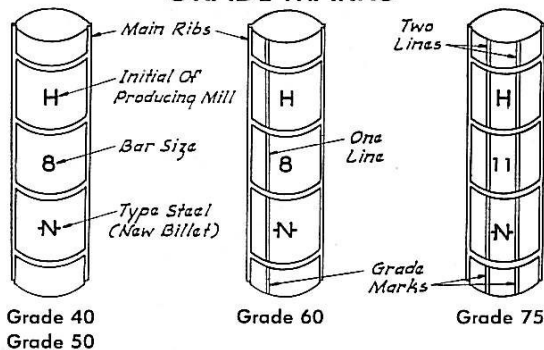
Lower Strength Bars Show Only 3 Marks (no grade mark) in the following order:

- 1st—Producing Mill (usually an initial)
- 2nd—Bar Size Number (#3 through #18)
- 3rd—Type (**N** for New Billet; **A** for Axle; **I** for Rail)

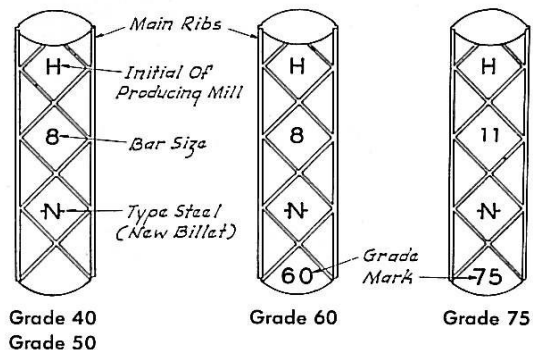
High Strength Bars Must Also Show Grade Marks:

- 60 or One (1) Line for 60,000 psi Strength
  - 75 or Two (2) Lines for 75,000 psi Strength
- (Grade mark lines are smaller and between the two main ribs which are on opposite sides of all U.S. made bars.)  
Number grade marks are 4th in order.

### CONTINUOUS LINE SYSTEM—GRADE MARKS



### NUMBER SYSTEM—GRADE MARKS



### BAR PRODUCERS USING THE LINE SYSTEM

1. Allison Steel Mfg. Co. Rolling Mill Div.
2. Armco Steel Corp.
5. Border Steel Mills, Inc.
8. CF&I Steel Corporation
11. Etiwanda Steel Producers, Inc.
12. Florida Steel Corp.
14. Great Lakes Steel Div. National Steel Corp.
18. Inland Steel Company
20. Judson Steel Corp.
21. Kaiser Steel Corporation
22. Kalmar Steel Corp.
23. Kankakee Electric Steel Co.
24. Laclede Steel Co.
26. Milton Manufacturing Company, Subsidiary of The Ceco Corporation
27. Mississippi Steel Corp.
28. Missouri Rolling Mill Corp.
29. North Star Steel Company
32. Northwestern Steel & Wire Co.
33. Oregon Steel Mills
34. Owen Electric Steel Co. of S. C.
35. Pacific States Steel Corp.
36. Phoenix Manufacturing Co.
37. Pollak Steel Co., The
39. Roanoke Electric Steel Corp.
43. Southern Electric Steel Company, Division of The Ceco Corporation
44. Southwest Steel Rolling Mills
46. Tennessee Forging Steel Corp.
49. West Virginia Works, Connors Steel Division, H. K. Porter Company, Inc.
51. Youngstown Sheet & Tube Co., The

### BAR PRODUCERS USING THE NUMBER SYSTEM

3. Atlantic Steel Co.
4. Bethlehem Steel Corporation
6. Calumet Steel Div., Borg-Warner Corp.
7. Ceco Corporation, The
9. Connors Works, Connors Steel Div., H. K. Porter Co., Inc.
10. Continental Steel Corp.
13. Franklin Steel Div., Borg-Warner Corp.
15. Hawaiian Western Steel Limited
16. Hoster Investment Co.
17. Industrial Siderurgica, Inc.
18. Inland Steel Co.
19. Jones & Laughlin Steel Corp.
25. Lone Star Steel Co.
30. Northern Steel, Inc.
31. Northwest Steel Rolling Mills, Inc.
38. Republic Steel Corp.
41. Schindler Bros. Steel Co.
42. Soulé Steel Co.
45. Structural Metals, Inc.
47. Texas Steel Co.
48. United States Steel Corp.
50. Witteman Steel Mills

\*See bar photos in sequence as numbered above for the first three identification marks and deformation patterns used by each mill, preceding pages.

REMARKS: Bar identification marks may also be oriented to read horizontal.  
Grade marks must be continued at least 5 deformation spaces.  
Grade marks must be placed within separate consecutive deformation spaces.