# Steel, Tubular Products and Steel Wire

January 2013



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# Steel, Tubular Products and Steel Wire

# January 2013

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- 0s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- p preliminary
- r revised
- x suppressed to meet the confidentiality requirements of the Statistics Act
- E use with caution
- F too unreliable to be published
- \* significantly different from reference category (p < 0.05)

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# **Highlights**

# January 2013

- Monthly production of primary steel and pig iron increased 7.3% in January 2013 to 1,095,657 metric tonnes.
- In the same month, the total disposition of shipments of rolled steel products increased 13.5% to 1,105,937 metric tonnes.
- Between December 2012 and January 2013, production of steel pipe and tubing decreased 2.2% to 180,251 metric tonnes.
- Total shipments of steel wire and specified wire products increased 50.9% to 35,303 metric tonnes in January 2013.

# **Related products**

# **Selected CANSIM tables from Statistics Canada**

| 303-0046 | Production and shipments of steel pipe and tubing                             |
|----------|---|
| 303-0047 | Production and shipments of steel wire and specified wire products            |
| 303-0048 | Production and shipments of pig iron  |
| 303-0049 | Pig iron and scrap products charged to furnace, by the primary metal industry |
| 303-0050 | Production and shipments of steel casting and primary forms steel products    |
| 303-0051 | Destination of net shipments of rolled steel products to consuming industries |

# **Selected surveys from Statistics Canada**

| 2105 | Steel Pipe and Tubing  |
|------|--|
| 2106 | Steel Wire and Specified Wire Products                       |
| 2116 | Steel Primary Forms, Steel Castings and Pig Iron             |
| 2184 | Disposition of Shipments of Ingots and Rolled Steel Products |

# **Statistical tables**

Table 1-1 Steel primary forms and pig iron — Disposition of net shipments of rolled steel products, by product and industry monthly 2013

|   | Steel<br>primary<br>forms               | Rails and<br>heavy<br>structural<br>sections | Intermediate<br>structural<br>sections                      | Light<br>structural<br>sections                     | Concrete reinforcing bars                                | Other<br>hot<br>rolled<br>bars   | Wire<br>rods | Railway<br>track<br>material |
|---|---|--|---|---|--|--|--------------|------------------------------|
|   |   |  |   | metric to   | nnes   |  |              |                              |
| January   |   |  |   |   |  |  |              |                              |
| Domestic shipments  |   |  |   |   |  |  |              |                              |
| Steel service centres and other wholesalers and warehouses Motor vehicles and parts Railway operating Railroad cars and locomotives Shipbuilding Steel fabrication Metal building systems Contractors'products Miscellaneous stamping and coating Natural resources and extractive industries Agricultural equipment Non electrical machinery Electrical machinery Industrial packaging material Pipes and tubes Wire and wire products Containers and closures Appliances and utensils industries Miscellaneous industries | 000000000000000000000000000000000000000 | 6,215<br>0<br>414<br>0<br>0<br>0<br>0        | 7,113<br>335<br><br>535<br>0<br>0<br>126<br>0<br>0<br>1,043 | 4,185<br>27<br><br>x<br>0<br><br>833<br>0<br>0<br>0 | 2,604<br><br>40,097<br>0<br>2,119<br>2,150<br>0<br><br>0 | 8,039<br>5,231<br>27<br>309<br>0<br>162<br>302<br>9,903<br>316<br>9,305<br>0<br>0<br>2,098 | 0<br>0<br>0  |                              |
| Total domestic shipments  | 0                                       | 6,632  | 9,152   | x   | 46,970   | 35,692   | x            | 0                            |
| Total domestic alloy shipments  | 0                                       |  | ·   |   |  | 6,002  | 0            |                              |
| Exports to the United States Exports to other countries (excluding United States)   | x<br>x                                  | 2,484<br>0                                   | 6,853<br>137  | 6,591<br>0  | 0  | 23,975<br>13,766   | x<br>x       | . 0                          |
| Total disposition   | x                                       | 9,116  | 16,142  | x   | 46,970   | 73,433   | x            | 0                            |
| Total alloy shipments   | 0                                       |  |   |   |  | 11,525   | 0            |                              |
| Producers interchange, for sale   | х                                       |  | 0   |   |  | 445  | 19           |                              |
| Exports for conversion and return   |   | •  | •   |   |  | 0  |              |                              |
| Imports by producers (including conversion)   | 0                                       |  |   |   |  |  | 0            |                              |

See notes at the end of the table.

Table 1-1 – continued

Steel primary forms and pig iron — Disposition of net shipments of rolled steel products, by product and industry monthly 2013

|   | Cold<br>finished<br>bars  | Plates <sup>1</sup>  | Hot rolled<br>sheets<br>and coils   | Cold<br>reduced<br>sheets and<br>strip and<br>other cold<br>rolled and<br>coated                  | Tin plate<br>and tin<br>free steel<br>(T.F.S.) | Galvanized<br>sheets<br>including<br>galvalume | Total,<br>rolled<br>steel<br>products  |
|---|---|--|---|---|--|--|--|
|   |   |  | n   | netric tonnes   |  |  |  |
| January   |   |  |   |   |  |  |  |
| Domestic shipments  |   |  |   |   |  |  |  |
| Steel service centres and other wholesalers and warehouses Motor vehicles and parts Railway operating Railroad cars and locomotives Shipbuilding Steel fabrication Metal building systems Contractors'products Miscellaneous stamping and coating Natural resources and extractive industries Agricultural equipment Non electrical machinery Electrical machinery Industrial packaging material Pipes and tubes Wire and wire products Containers and closures Appliances and utensils industries Miscellaneous industries Miscellaneous industries Miscellaneous industries | 1,789<br>903<br><br>x<br><br>0<br>0<br>102<br>64<br>0<br><br>0<br>x | 14,350<br>14<br>0<br>842<br>4,441<br>4,121<br>0<br>0<br>375<br>20<br><br>0 | 226,699<br>43,773<br>0<br>0<br>2,835<br>0<br>3,797<br>3,002<br>0<br>0<br>832<br>72<br>0<br>156,295<br>139<br>235<br>0 | 21,981<br>7,677<br>144<br>3,360<br>2,959<br>0<br>0<br>0<br>1,475<br>5,637<br>556<br>44<br>0<br>27 | 1,085<br>0                                     | 39,876 54,659 0                                | 333,936<br>112,619<br>27<br>842<br>0<br>x<br>1,544<br>36,017<br>19,951<br>12,155<br>755<br>11,200<br>2,562<br>5,637<br>159,903<br>x<br>1,302<br>1,722<br>1,722 |
| Total domestic shipments  | x   | 24,163   | 437,679   | 43,860  | 2,152  | 138,161  | 777,217  |
| Total domestic alloy shipments  | 0   | 0  | -   | 0   |  | -  | 6,002  |
| Exports to the United States Exports to other countries (excluding United States)   | 1,687<br>0  | 11,331<br>1,610  | 93,344<br>8,526   | 19,004<br>369   | 21,012<br>841                                  | 66,529<br>13,733                               | 288,033<br>40,687  |
| Total disposition   | x   | 37,104   | 539,549   | 63,233  | 24,005   | 218,423  | 1,105,937  |
| Total alloy shipments   | 718   | 0  |   | 0   |  |  | 12,243   |
| Producers interchange, for sale   | 0   |  | 0   | 0   |  | 0  | х  |
| Exports for conversion and return   |   |  | 0   | 0   |  | 0  | 0  |
| Imports by producers (including conversion)   |   | 0  | 206   | 3,843   |  | 0  | 4,049  |

Effective January 2000, producers have changed the way they report hot rolled products. The result is a change in definitions. Plates including plates for
pipes and tubes becomes plates. Hot rolled sheet and strip becomes hot rolled sheets and coils and now includes all hot rolled flat products in coils,
regardless of thickness.

Note(s): Compiled by principal consuming industries, according to distribution of shipments reported by iron and steel mills.

Table 1-2 Steel primary forms and pig iron — Disposition of net shipments of rolled steel products, by product and industry, year-to-date 2013

|  | Steel<br>primary<br>forms | Rails and<br>heavy<br>structural<br>sections | Intermediate<br>structural<br>sections | Light<br>structural<br>sections | Concrete<br>reinforcing<br>bars | Other<br>hot<br>rolled<br>bars | Wire<br>rods | Railway<br>track<br>material |
|--|---------------------------|--|--|---------------------------------|---------------------------------|--------------------------------|--------------|------------------------------|
|  |                           |  |  | metric to                       | nnes                            |                                |              |                              |
| Domestic shipments   |                           |  |  |                                 |                                 |                                |              |                              |
| Steel service centres and other wholesalers and warehouses<br>Motor vehicles and parts<br>Railway operating<br>Railroad cars and locomotives | 0<br>0<br>0               | 6,215<br>0<br>0                              | 7,113<br>335                           | 4,185<br>27                     | 2,604<br>0                      | 8,039<br>5,231<br>27           | 0<br>0<br>0  |                              |
| Shipbuilding Steel fabrication Metal building systems Contractors'products Miscellaneous stamping and coating                                | 0<br>0                    | 414<br>0<br>0<br>3                           | 535<br>0<br>0<br>126                   | X<br>0<br>833                   | 40,097<br>0<br>2,119            | 309<br>0<br>162<br>302         | 0<br>221     |                              |
| Natural resources and extractive industries Agricultural equipment Non electrical machinery Electrical machinery                             |                           | 0 0 0  | 0<br>0<br>1,043                        | 0<br>0<br>0                     | 2,150<br>0                      | 9,903<br>316<br>9,305<br>0     | 0<br>0       | 0                            |
| Industrial packaging material Pipes and tubes Wire and wire products Containers and closures Appliances and utensils industries              | 0                         |  |  |                                 | 0                               | 0<br>0<br>2,098                | X            |                              |
| Miscellaneous industries   | 0                         | 0  | ·                                      | ·                               | 0                               | 0                              | •            | •                            |
| Total domestic shipments   | 0                         | 6,632  | 9,152                                  | х                               | 46,970                          | 35,692                         | х            | 0                            |
| Total domestic alloy shipments   | 0                         | -  |  | •                               | •                               | 6,002                          | 0            |                              |
| Exports to the United States Exports to other countries (excluding United States)  | x<br>x                    | 2,484<br>0                                   | 6,853<br>137                           | 6,591<br>0                      | 0                               | 23,975<br>13,766               | x<br>x       |                              |
| Total disposition  | x                         | 9,116  | 16,142                                 | x                               | 46,970                          | 73,433                         | x            | 0                            |
| Total alloy shipments  | 0                         |  |  |                                 |                                 | 11,525                         | 0            |                              |
| Producers interchange, for sale  | x                         |  | 0                                      |                                 |                                 | 445                            | 19           |                              |
| Exports for conversion and return  |                           |  |  |                                 |                                 | 0                              | •            |                              |
| Imports by producers (including conversion)  | 0                         |  |  |                                 |                                 |                                | 0            |                              |

See notes at the end of the table.

Table 1-2 – continued

Steel primary forms and pig iron — Disposition of net shipments of rolled steel products, by product and industry, year-to-date 2013

|   | Cold<br>finished<br>bars | Plates <sup>1</sup>   | Hot rolled<br>sheets and<br>coils                               | Cold reduced<br>sheets and<br>strip and<br>other cold<br>rolled and<br>coated                    | Tin plate<br>and tin<br>free steel<br>(T.F.S.) | Galvanized<br>sheets<br>including<br>galvalume                       | Total,<br>rolled<br>steel<br>products  |
|---|--------------------------|---|---|--|--|--|--|
|   |                          |   |   | metric tonnes  |  |  |  |
| Domestic shipments  |                          |   |   |  |  |  |  |
| Steel service centres and other wholesalers and warehouses Motor vehicles and parts Railway operating Railroad cars and locomotives Shipbuilding Steel fabrication Metal building systems Contractors'products Miscellaneous stamping and coating Natural resources and extractive industries Agricultural equipment Non electrical machinery Electrical machinery Industrial packaging material Pipes and tubes Wire and wire products Containers and closures Appliances and utensils industries Miscellaneous industries | 1,789<br>903<br>         | 14,350<br>14<br>0<br>842<br>4,441<br>0<br>0<br>375<br>20<br><br>0 | 226,699 43,773 0 0 0 3,797 3,002 0 832 72 0 156,295 139 235 0 0 | 21,981<br>7,677<br><br>144<br>3,360<br>2,959<br>0<br>0<br>1,475<br>5,637<br>556<br>44<br>0<br>27 | 1,085<br>0                                     | 39,876 54,659 0 1,323 1,544 22,237 12,726 0 0 1,015 0 3,052 34 1,695 | 333,936<br>112,619<br>27<br>842<br>0<br>x<br>1,544<br>36,017<br>19,951<br>12,155<br>755<br>11,200<br>2,562<br>5,637<br>159,903<br>x<br>1,302<br>1,722<br>105 |
| Total domestic shipments  | x                        | 24,163  | 437,679   | 43,860   | 2,152  | 138,161  | 777,217  |
| Total domestic alloy shipments  | 0                        | 0   |   | 0  |  |  | 6,002  |
| Exports (for final sale)  |                          |   |   |  |  |  |  |
| Exports to the United States Exports to other countries (excluding United States)   | 1,687<br>0               | 11,331<br>1,610   | 93,344<br>8,526   | 19,004<br>369  | 21,012<br>841                                  | 66,529<br>13,733   | 288,033<br>40,687  |
| Total disposition   | x                        | 37,104  | 539,549   | 63,233   | 24,005   | 218,423  | 1,105,937  |
| Total alloy shipments   | 718                      | 0   |   | 0  |  |  | 12,243   |
| Producers interchange, for sale   | 0                        | •   | 0   | 0  |  | 0  | х  |
| Exports for conversion and return   |                          | -   | 0   | 0  |  | 0  | 0  |
| Imports by producers (including conversion)   |                          | 0   | 206   | 3,843  |  | 0  | 4,049  |

Effective January 2000, producers have changed the way they report hot rolled products. The result is a change in definitions. Plates including plates for
pipes and tubes becomes plates. Hot rolled sheet and strip becomes hot rolled sheets and coils and now includes all hot rolled flat products in coils,
regardless of thickness.

Note(s): Compiled by principal consuming industries, according to distribution of shipments reported by iron and steel mills.

Table 1-3
Steel primary forms and pig iron — Production of pig iron

|                        | January       |         | Year-to-date |         |  |  |  |
|------------------------|---------------|---------|--------------|---------|--|--|--|
| -                      | 2012          | 2013    | 2012         | 2013    |  |  |  |
|                        | metric tonnes |         |              |         |  |  |  |
| Production of pig iron | 676,713       | 416,593 | 676,713      | 416,593 |  |  |  |

Table 1-4 Steel primary forms and pig iron — Pig iron and scrap charged to steel furnaces

|                                       | January            |                    | Year-to-date       |                    |
|---------------------------------------|--------------------|--------------------|--------------------|--------------------|
|                                       | 2012               | 2013               | 2012               | 2013               |
|                                       |                    | metric tonnes      | ;                  |                    |
| Pig iron including pre-reduced iron   | 700,392            | 474,211            | 700,392            | 474,211            |
| <b>Scrap</b><br>Own make<br>Purchased | 143,910<br>471,409 | 315,967<br>321,412 | 143,910<br>471,409 | 315,967<br>321,412 |
| Total, pig iron and scrap products    | 1,315,711          | 1,111,590          | 1,315,711          | 1,111,590          |

Table 1-5 Steel primary forms and pig iron — Production and shipments of steel, primary forms, monthly

|   | Production |               | Shipments |         |
|---|------------|---------------|-----------|---------|
|   | 2012       | 2013          | 2012      | 2013    |
|   |            | metric tonnes |           |         |
| January   |            |               |           |         |
| Steel, primary forms (carbon and alloy including continuous cast steel) |            |               |           |         |
| Electric furnace  | 489,669    | 441,983       | X         | х       |
| Basic oxygen furnace  | 698,471    | 653,674       | X         | х       |
| Steel, primary forms - Total  | 1,188,140  | 1,095,657     | 177,563   | 167,087 |
| Included in "Steel primary forms total" above<br>Continuous cast steel  | 1,155,545  | 1,064,699     | 151,545   | 138,004 |

Table 1-6 Steel primary forms and pig iron — Production and shipments of steel, primary forms, year-to-date

|   | Production         |                    | Shipments |         |  |
|---|--------------------|--------------------|-----------|---------|--|
|   | 2012               | 2013               | 2012      | 2013    |  |
|   | metric tonnes      |                    |           |         |  |
| Steel, primary forms (carbon and alloy including continuous cast steel) Electric furnace Basic oxygen furnace | 489,669<br>698,471 | 441,983<br>653,674 | x<br>x    | x<br>x  |  |
| Steel, primary forms - Total  | 1,188,140          | 1,095,657          | 177,563   | 167,087 |  |
| Included in "Steel primary forms total" above<br>Continuous cast steel  | 1,155,545          | 1,064,699          | 151,545   | 138,004 |  |

Table 2-1
Steel pipe and tubing — Production and shipments, monthly 2013

|   | Production               | Shipments for sale              |                  |                           |
|---|--------------------------|---------------------------------|------------------|---------------------------|
|   |                          | Domestic shipments <sup>1</sup> | Exports          | Total<br>shipments        |
|   | metric tonnes            |                                 |                  |                           |
| January   |                          |                                 |                  |                           |
| Total, pipe and tubing  | 180,251                  | 149,382                         | 85,562           | 234,943                   |
| Pipe welded and seamless  |                          |                                 |                  |                           |
| Line pipe up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter over 16" (40.64 cm) outside diameter          | 2,289<br>8,251<br>31,624 | 1,527<br>x<br>4,278             | 0<br>x<br>19,121 | 1,527<br>12,044<br>23,399 |
| Hollow structural sections up to and including 16" (40.64 cm) periphery over 16" (40.64 cm) periphery   | x<br>x                   | x<br>x                          | X<br>X           | 13,907<br>x               |
| Standard pipe up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter   | x<br>x                   | x<br>x                          | X<br>X           | x<br>x                    |
| Other pipe up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter over 16" (40.64 cm) outside diameter         | 2,721<br>x               | x<br>x<br>1,842                 | 31<br>x<br>21    | x<br>x<br>1,863           |
| Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled  | 19,545<br>6,578          | 10,837<br>4,728                 | 6,502<br>1,973   | 17,339<br>6,701           |
| Oil country tubular goods Oil country tubular goods, welded and seamless, casing (including coupling) Oil country tubular goods, welded and seamless, oilwell tubing (including coupling) | 36,711<br>13,814         | 42,579<br>x                     | 15,125<br>x      | 57,704<br>x               |
| Other tubular products  | x                        | 1,880                           | 613              | 2,493                     |

<sup>1.</sup> Including for own use by the steel pipe and tubing industries.

Table 2-2
Steel pipe and tubing — Production and shipments, year-to-date 2013

|   | Production               | Shipments for sale              |                  |                           |
|---|--------------------------|---------------------------------|------------------|---------------------------|
|   | _                        | Domestic shipments <sup>1</sup> | Exports          | Total shipments           |
| _   | metric tonnes            |                                 |                  |                           |
| Total, pipe and tubing  | 180,251                  | 149,382                         | 85,562           | 234,943                   |
| Pipe welded and seamless  |                          |                                 |                  |                           |
| Line pipe up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter over 16" (40.64 cm) outside diameter          | 2,289<br>8,251<br>31,624 | 1,527<br>x<br>4,278             | 0<br>x<br>19,121 | 1,527<br>12,044<br>23,399 |
| Hollow structural sections<br>up to and including 16" (40.64 cm) periphery<br>over 16" (40.64 cm) periphery   | x<br>x                   | x<br>x                          | x<br>x           | 13,907<br>x               |
| Standard pipe up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter   | x<br>x                   | x<br>x                          | x<br>x           | x<br>x                    |
| Other pipe up to and including 4 1/2" (11.43 cm) outside diameter over 4 1/2" (11.43 cm) up to and including 16" (40.64 cm) outside diameter over 16" (40.64 cm) outside diameter         | 2,721<br>x               | x<br>x<br>1,842                 | 31<br>x<br>21    | x<br>x<br>1,863           |
| Mechanical tubing Mechanical tubing, welded, produced from hot rolled Mechanical tubing, welded, produced from cold rolled  | 19,545<br>6,578          | 10,837<br>4,728                 | 6,502<br>1,973   | 17,339<br>6,701           |
| Oil country tubular goods Oil country tubular goods, welded and seamless, casing (including coupling) Oil country tubular goods, welded and seamless, oilwell tubing (including coupling) | 36,711<br>13,814         | 42,579<br>x                     | 15,125<br>x      | 57,704<br>x               |
| Other tubular products  | х                        | 1,880                           | 613              | 2,493                     |

<sup>1.</sup> Including for own use by the steel pipe and tubing industries.

Table 3-1
Steel and specified wire products — Factory shipments, monthly

|  | Shipments |                 |                    | Production |              |  |
|--|-----------|-----------------|--------------------|------------|--------------|--|
| _  | 2012      | 2013            |                    | 2013       |              |  |
|  | _         | Total shipments | Domestic shipments | Exports    |              |  |
|  |           |                 | metric tonnes      |            |              |  |
| January  |           |                 |                    |            |              |  |
| Barbed wire  | х         | х               | х                  | 0          |              |  |
| Uncoated steel wire  | 18,596    | 17,817          | 7,981              | 9,836      | -            |  |
| Galvanized steel wire  | 8,722     | 7,505           | 2,843              | 4,662      | -            |  |
| Other coated steel wire  | X         | X               | X                  | 0          |              |  |
| Farm fencing and wire chain link fabric Wire mesh, bright or uncoated and galvanized | 404       | 424             | x<br>2,089         | X          | 569<br>2,443 |  |
| Wire rope  | X<br>X    | X<br>X          | ,                  | X<br>X     | 2,443<br>X   |  |
| Nails and staples  | 2,764     | X               | 834                | X          | X            |  |
| Wire roofing nails of a length of 25 mm or more, iron or steel                       | 2,763     | 2,202           | X                  | X          | 1,752        |  |
| Staples of iron or steel   | 1         | _,X             | X                  | 0          | .,. 62<br>X  |  |
| All other wire products  | x         | 1,789           | 1,786              | 3          | 1,312        |  |
| Grand total  | 38,420    | 35,303          | 17,898             | 17,405     |              |  |

Note(s): Data has been revised from March 2010 to November 2011. These revised data are available at: www.statcan.gc.ca/cansim, table 303-0047. Totals may not add due to rounding.

Table 3-2
Steel and specified wire products — Factory shipments, year-to-date

|  | Shipments |                 |                    |         | Production |
|--|-----------|-----------------|--------------------|---------|------------|
|  | 2012      | 2013            |                    |         |            |
|  |           | Total shipments | Domestic shipments | Exports |            |
| <u> </u>   |           |                 | metric tonnes      |         |            |
| Barbed wire  | x         | x               | х                  | 0       | -          |
| Uncoated steel wire  | 18,596    | 17,817          | 7,981              | 9,836   |            |
| Galvanized steel wire  | 8,722     | 7,505           | 2,843              | 4,662   |            |
| Other coated steel wire  | X         | Х               | X                  | 0       |            |
| Farm fencing and wire chain link fabric                        | 404       | 424             | Х                  | X       | 569        |
| Wire mesh, bright or uncoated and galvanized                   | Х         | Х               | 2,089              | X       | 2,443      |
| Wire rope  | Х         | Х               | Х                  | X       | X          |
| Nails and staples  | 2,764     | Х               | 834                | X       | X          |
| Wire roofing nails of a length of 25 mm or more, iron or steel | 2,763     | 2,202           | Х                  | X       | 1,752      |
| Staples of iron or steel                                       | 1         | Х               | Х                  | 0       | X          |
| All other wire products  | х         | 1,789           | 1,786              | 3       | 1,312      |
| Grand total  | 38,420    | 35,303          | 17,898             | 17,405  |            |

Note(s): Data has been revised from March 2010 to November 2011. These revised data are available at: www.statcan.gc.ca/cansim, table 303-0047. Totals may not add due to rounding.

# Concepts, methodology and data quality

This publication presents the results of four monthly surveys: Steel Primary Forms, Steel Castings and Pig Iron; Ingots and Rolled Steel Products; Steel Pipe and Tubing; and Steel Wire and Specified Wire Products. These surveys measure, on a monthly basis, the quantities of selected steel products that are produced and shipped by Canadian manufacturers. The target population for these surveys includes manufacturers in Canada of primary steel, steel products, pig iron, steel pipe and tubing as well as, steel wire as defined in the Standard Classification of Goods (SCG) that report these products to the Annual Survey of Manufactures and Logging (ASML) (Survey ID 2103). This means that estimates from the monthly surveys do not cover the entire universe of steel producers in Canada because the ASML does not survey all businesses. Instead, the ASML uses administrative data to cover the small and medium-sized establishments. These manufacturers are not part of the four monthly surveys.

# **General methodology**

Data are collected each month, directly from survey respondents using a mail-out / mail-back process. Data capture and preliminary editing are performed simultaneously to ensure validity of the data. Businesses from whom no response has been received or whose data may contain errors are followed-up by telephone or fax.

Missing data for the current month are imputed automatically by applying to the previous month's value, the month-to-month change observed for the same period in the previous year, for the unit in question. However, an option exists for analysts to manually override this imputation with a better estimate based on pertinent knowledge about the industry or the business.

Various confidentiality rules are applied to all data before they are released to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent the direct or residual disclosure of identifiable data.

Direct disclosure could occur when the value in a tabulation cell is composed of a few respondents or when the cell is dominated by a few companies. Residual disclosure could occur when confidential information can be derived indirectly by piecing together information from different sources or data series.

Under normal circumstances, data are collected, captured, edited, tabulated and published within 6-8 weeks after the reference month.

#### **Revisions**

Data may be revised to include amended information or reports from respondents that are received after the end of a collection cycle. Revisions are disseminated in subsequent periods and reflected in the CANSIM series and in the tables of this publication.

#### **Data accuracy**

The methodology of these surveys has been designed to promote data accuracy. Since data are collected from all Canadian producers of primary steel, steel products, pig iron, steel pipe and tubing and steel wire within the target population, the resulting estimates are not subject to sampling error. However, the results are still subject to the non-sampling errors associated with coverage, non-response, inaccurate reporting, and processing. Errors relating to coverage and non-response can be measured and are summarized in text table 1. All attempts are made to control inaccurate reporting and processing errors.

Moreover, survey results are analyzed to ensure comparability with patterns observed in historical data series and the economic condition of the industry. Information available from other sources such as the Steel Primary Forms Weekly Survey (Survey ID 2131) and the Monthly Survey of Manufacturing (MSM) (Survey ID 2101) are also used in the validation process.

# Coverage error

There is a degree of under coverage (referred to as coverage error) in the survey results as there is generally a lag between the time a new business comes into existence and when it is included in the universe of these sub-annual surveys. This occurs because the list of businesses surveyed is derived from the latest available survey results for the ASML which are not available until 15 months after the reference period.

This error is kept at a minimum by also using advance information from the ASML frame, feedback from the MSM and other sources such as the Canadian Steel Producer's Association, trade journals and newspaper articles, to identify new survey units.

# Non-response error

Some respondents may be unable to provide data for numerous reasons (i.e. fire, theft, strike, economic hardship, etc.), while others may be late in responding. To minimize non-response, delinquent respondents are followed up rigorously by phone or fax. Data for non-responding units are imputed using industry trend and other related information. Data are revised at a later date, if completed questionnaires are received after the end of a collection cycle.

# Inaccurate response

Inaccuracy may result from poor questionnaire design or an inability on the part of respondents to provide the requested information or from misinterpretation of the survey questions. To reduce such errors the format and wording in the questionnaire are reviewed from time to time and modified based on feedback from survey respondents and data users. Respondents are also reminded of the importance of their contribution and of the need for accurate data reporting.

# **Processing errors**

These errors may occur at various stages in the processing of survey data such as data entry, verification, editing and tabulation. Data are examined for such errors using automated edits along with an analytical review by subject matter experts. Several checks are performed on the collected data to verify internal consistency and comparability over time.

Text table 1
Coverage and non-response errors

|   | Coverage error based on the<br>Annual Survey of Manufactures<br>and Logging (ASML) 2004 | Non-response error-<br>annual average 2005 |
|---|---|--|
| Steel primary forms steel castings and pig iron | 0   | 6  |
| Ingots and rolled steel products                | 3   | 0  |
| Steel pipe and tubing                           | 0   | 0  |
| Steel wire                                      | 0   | 0  |

# **Definitions**

## **Shipments:**

Shipments refer to the quantity of manufactured goods that are shipped, during the reference period from the plant to customers in domestic or export markets.

#### **Production:**

Production refers to the quantity of goods manufactured in Canada during a reference period including intermediate products. The final goods may be shipped or retained in inventory.

#### **Exports:**

Shipments of goods destined for customers outside of Canada.

# **Disposition of shipments:**

Disposition of shipments refers to the distribution of shipped quantities of manufactured goods by end use (market).

# **Coverage ratio:**

The share of total Annual Survey of Manufactures (ASM) shipment values for products included in a given sub-annual survey from businesses surveyed by the same sub-annual survey.

# Non-response rate:

Number of non-responses in the year, divided by the number of total expected responses in the year.

Number of non-responses in the year, divided by the number of total expected responses in the year. More detailed information is available from the Annual Survey of Manufactures and Logging, CANSIM Table 301-0006. Specific enquiries should be directed to: The Dissemination and Frame Services section, Manufacturing and Energy Division, Statistics Canada, Ottawa, Ontario, K1A OT6 (Telephone: 1-866-873-8789 or 613-951-9497; Fax line: 613-951-3877; Internet: *manufact@statcan.gc.ca* ).