

Standard Commercial Terms and Conditions for the Sale, Manufacture, and Shipping of Bars, Billets, Ingots and Blooms

Introduction

This document sets forth TimkenSteel Corporation's ("TimkenSteel") practices for the manufacture, sale and shipping of carbon and alloy bars, billets, blooms and ingots, to the extent such practices are not otherwise specifically detailed in our quotations and customer order acknowledgments. Deviations from these practices are subject to review at time of inquiry and should be resolved prior to order acceptance. Special practices should be stated as part of the purchase order or as part of the order specification, and will not apply to the order unless specifically accepted in TimkenSteel's customer order acknowledgment.

Bar products are produced free from defects in workmanship but may contain incipient surface anomalies consistent with good commercial practice for the condition to which it is ordered. The end use, such as for forging purposes or machining purposes, determines the surface inspection practice.

This document should be included in your quality records.

Conditions of Acknowledgment and Acceptance of Purchase Orders

These standard commercial terms and conditions are in addition to TimkenSteel's terms and conditions of sale, which can be found at <http://timkensteel.com/buy-from-us/terms-and-conditions-of-sales>. All sales of bar products by us are subject to TimkenSteel's terms and conditions of sale, as stated on our customer order acknowledgment. A copy of TimkenSteel's terms and conditions of sale has been mailed to you along with these standard commercial terms and conditions for your information.

General Terms of Sale

Prices are subject to change without notice. Unless otherwise negotiated, prices in effect at the time of shipment will apply. Charges for special processing agreements, certain testing, and surcharges may apply.

For Domestic orders: Prices are quoted per hundred weight (100 Lbs.) f.o.b. our mill at Canton, Ohio. Terms are 1% 10 Days, Net 30 Days from date of invoice.

For International orders: Prices are quoted per hundred weight (100 Lbs.) or in metric units, ex works (EXW) our mill at Canton, Ohio, or per other INCOTERMS 2010 as negotiated and reflected in the customer order acknowledgment. Terms are letter of credit unless different terms are approved in writing by a TimkenSteel Sales Manager in conjunction with the Section Manager – AR/Credit.

Purchase order requirements, including quantity and requested delivery dates, are subject to available capacity at time of order placement. Allocation restrictions may apply.

The quantity is determined by the total quantity of one size, chemical analysis, condition, thermal treatment, and finish ordered by one customer for manufacture and shipment at one time to one consignee and one destination.

Dimensional Considerations

Length Dimensions

1. Random Lengths

	Specified Lengths, Feet	OD Size Range		
		Thru 3"	Over 3" Thru 6"	Over 6"
Std. Spread	Minimum length over 30' to 40' incl.	4 Ft.	5 Ft.	6 Ft.
Std. Spread	Minimum length over 20' to 30' incl.	3 Ft.	4 Ft.	5 Ft.
Std. Spread	Minimum length over 5' to 20' incl.	2 Ft.	3 Ft.	4 Ft.

For Double Thermal Treated Product: Add two feet to the above spreads.

2. Multiple Lengths

Lengths in multiples will be offered only when the specific multiple assures an acceptable yield from the product of an ingot or strand cast bloom. Multiple lengths in units 5' or under can be specified as follows:

- A maximum bar length may be specified in the required unit multiple provided it is not less than 10'.
- A minimum bar length may also be specified provided it does not exceed 50% of the maximum length and the resulting spread contains at least three unit multiples.

3. Dead Lengths

a. Dead Lengths With Shorts

- Dead lengths 10' or over may be specified when a percentage of the ordered weight is acceptable in random shorts down to 8' as follows:

Thru 3"10%
Over 3" thru 6"15%
Over 6"20%

b. Dead Lengths With Resultant Shorts in Multiples

Dead lengths 10' or over may be specified if all resultant shorts in unit multiples not over 5' are acceptable.

End Finish – Bars may be hot saw cut or cold saw cut depending on length.

OD Dimensions

OD dimensions may be measured with a micrometer or a properly calibrated nondestructive testing device of appropriate accuracy. In the case of dispute, the measurement determined by use of a two-point micrometer will govern.

Although care is taken during steelmaking and rolling, steel bar products may contain imperfections. Surface imperfections are relatively infrequent, minute in nature and can be safely ignored in some applications. In the interests of simplicity and cost, the supplier and purchaser should determine the limits on acceptable imperfections.

The following shows the minimum stock removal recommended for Hot Rolled Bars (machining bar quality) to minimize occasional surface imperfections and decarburization, based on bar diameter.

Standard Grades 1.6% per side
Resulfurized Grades 2.4% per side

(R) Hot rolled bar product dimensions may contain localized spots or strips that can measure whichever is less 0.016" or up to 0.2% of the OD dimension (or across flats of a round cornered square) over the maximum tolerance or under the minimum tolerance and can be evaluated as merchantable consistent with good commercial practice and can be shipped without notice.

Straightness

Straightness is a quality that can be altered by mishandling. Preservation of straightness requires utmost care in handling after the bars leave TimkenSteel's control.

Reduction Ratio

Reduction ratio is calculated using the largest cross-section of the ingot or as-cast bloom.

Scale Free

The term "scale free" in a condition indicates that a process to reduce scale has been used but does not imply the total absence of any scale on shipped product.

Stress Free

The term "stress free" in the condition of thermally treated products indicates that a process to reduce residual stress has been used but does not imply the total absence of any residual stress in the shipped product.

Rust Free

The term "rust free" on TimkenSteel acknowledgement forms, certifications or other correspondence indicates that actions were taken to minimize the presence of rust but does not imply the complete absence of rust.

Testing Considerations

Use standard methods and/or validated modifications of standard methods.

Hardness Locations When A Hardness Test Is Specified

Single thermal treated or non-heat treated product: Mid-radius.
Double thermal treated product: OD surface.

Grain Size

When aluminum is used as the grain-refining element, fine grain size is determined based on chemical content.

Hardenability

Hardenability values may be calculated.**

Mechanical Properties

Mechanical properties for hot rolled or annealed product may be reported as typical values based on process path and grade data.**

Macroetch and/or Nonmetallic Inclusion

Statements of capability for macroetch and/or nonmetallic inclusions may be used based on periodic testing.**

Macroetch is typically a heat test and as such, test size may not be representative of the product size ordered.

Magnetic Particle Rating

Magnetic particle rating is reported as a summary number for the heat. (Reference AMS 2300, 2301, 2304).

Chemistry Check Analysis

Chemistry check analysis may be performed on semi-finished product samples from the heat.

**Refer to Steel Certificate of Test

Customer Material Conversion considerations

Incoming ingots or blooms will be supplied by customer to the mill in Canton, OH in the condition specified by TimkenSteel.

Toll processing is performed on a commercially reasonable "best effort" basis. TimkenSteel will put forth its commercially reasonable best effort to convert incoming billets to customer specification based on material and manufacturing knowledge, which may be limited. Any material not converted to bar form will be returned to the customer.

General Sales Terms apply.

Shipping Considerations

Shipping Practice

Bar products and ingots are shipped via flat bed truck, rail, or ocean containers using a carrier selected by TimkenSteel to provide the lowest cost reliable service for the freight lane.

Freight is paid by the mill and added to the steel invoices as a separate line item. Freight rates are subject to change without notice.

For customers who specify specific carriers, the freight costs will be billed as collect.

Customers who utilize their own trucks, upon notification that material is available for shipment, have seven (7) calendar days to pick up their material. After this period, TimkenSteel may ship the material via commercial carrier.

The mill is authorized (without prior notification) to make partial shipments of an order to complete a truckload or to meet a delivery promise date.

Order Quantity / Shipping Quantity

The minimum order quantity is 20,000 lbs. Bar orders must be placed in increments of 10,000 lbs.

Because of the difficulty in predetermining accurately the exact weight which may be produced for a specified quantity, shipments over and under the ordered quantity are permitted according to the following schedules:

- Standard Product
 - 20,000 lbs. to less than 40,000 lbs.: Over tolerance is 15% and under tolerance is 5%.
For bars that weigh over 2,000 lbs.: Over and under tolerance is 2 bars.
 - 40,000 lbs. and above: Over tolerance is 15% and under tolerance is 5%.
For bars that weigh over 2,000 lbs.: Over and under tolerance is 3 bars.
- Customer Releases from Finished Inventory Program
 - Truckload releases: No ship tolerance applies.
 - Less-than-truckload: plus or minus one bundle
- Heat Lots

Special grades melted on a restricted heat lot basis will have no shipping quantity tolerance applicable.

Promise Week

The promise week date is the Monday of the week that bar product is expected to be ready to ship. Shipments are authorized one week prior to the promise week date, and orders available to ship the Thursday of the promise week are considered on time.

Packaging Considerations

Surface Preparation

Bar products are shipped without oiling.

Bundles - Bar Products

Bar products are shipped in uniform bundles (2 piece minimum all rounds) with bundles containing random lengths in 4 ft. increments. Two piece bundles are required for loading. Residual pieces may be shipped loose. If necessary for safety considerations, TimkenSteel may bundle two pieces together even if doing so exceeds the customer's maximum bundle weight. Bundles are blocked on a minimum of 3" x 4" horizontal dunnage provided by the carrier. The following strapping configurations apply, unless the customer specifies additional banding as listed on the order:

Bundles manually banded use 0.029" steel bands with notched seals as follows:

Bundles up to 3,000 lbs. – 4 single bands
Bundles 3,000 to 6,000 lbs. – 2 single bands, 2 double loop bands
Bundles 6,000 lbs. and over – 4 double loop bands

End bands are placed within 18" of bundle end or to capture shortest piece within a bundle.

Bundles automatically banded use 0.031" minimum steel bands with welded joints as follows:

Two-piece bundles of any weight – 4 single bands

Bundles up to 3,000 lbs. – 4 single bands

Bundles 3,000 to 8,000 lbs. – 6 single bands

Bundles 8,000 lbs. and over – 8 single bands

Note: The single bands used on the automatically applied bands are considered equivalent to the double loop bands of the manually applied bands, since the automatically applied bands are placed in pairs as illustrated in the Example of Band Spacing column.

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Identification

Bars larger than 6" diameter have heat number identification on one end. Bars with a 6" diameter and smaller have heat number identification on a minimum of one piece per bundle.

Bar products are not routinely stenciled. If stenciling is specified, bars are stenciled one time reporting: TimkenSteel-Type-Size-Heat No.-Customer Order No.-Made in USA.

All bar products are tagged with a bar coded tag showing the following:

- TimkenSteel
- TimkenSteel Production Order Number
- Specification ("customer type" of steel grade)
- Customer Part Number (when shown on production order)
- Supplier Number (when provided by the customer)
- Bundle Number
- Customer Purchase Order Number
- TimkenSteel Heat Number
- Size (one dimension for rounds; two for squares)
- The "Ship To" Customer and Address
- Bundle Weight and Bundle Piece Count

Order status is available electronically as part of our 24 hour web based portal (<https://portal.timkensteel.com>). Status reports are updated every 8 hours and shows quantity shipped, quantity in shipping, partial and/or complete shipments, bill of lading number, name of carrier and any appointments the carrier has made, and repromise dates if applicable. Repromise dates may not be available during holiday weeks such as Thanksgiving and Christmas.

Rev. 2017-12-18
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Painting/Stickers

Bars requiring painting will be painted on one end only, or a colored sticker will be placed on one end only in lieu of paint.

Ingots

As-cast ingots are sold, but the following quality statement MUST be included on the customer's order acknowledgement, "TimkenSteel is supplying as-cast ingots and has no control over subsequent forging or other processing." TimkenSteel's limited warranty for as-cast ingots exclude, among other things, the following:

- UT indications other than those that are the result of gross, exogenous inclusions demonstrably resulting from the steelmaking process.
- Magnetic particle indications other than those exceeding ASTM A788 S18 as a result of gross, exogenous inclusions demonstrably resulting from the steelmaking process.
- Voids or porosity remnant of the ingot solidification process.
- Conditions caused by any post-sale processing.

TimkenSteel will only be responsible for the quality for forged parts as related to the raw material attributes of non-metallic inclusions and hydrogen content as described above.

Quality System Requirements

Communications are periodically sent to customers identifying their Supplier Quality System Requirements that are on file at TimkenSteel. It is the customer's responsibility to review and act on any such communications and to notify TimkenSteel immediately of any updates to the Supplier Quality System Requirements.

Control Plans

In the absence of an application-specific control plan, TimkenSteel standard control plans will apply.

Process Changes

Process changes and customer notifications are managed and defined through internal standards.

Enhanced Proliferation Control Initiative (EPCI)

Import and export control laws and regulations, including but not limited to the Enhanced Proliferation Control Initiative (EPCI), the International Traffic in Arms Regulations (ITAR) and the Export Administration Regulations (EAR) may restrict TimkenSteel and/or its customers from exporting, re-exporting, or transferring products or conducting services unless explicitly authorized by the U.S. Government.

Customer is responsible for compliance with all import and export control laws and regulations. Customer will obtain import, export, re-export approvals and licenses required for goods, transfers, services and technical data delivered to it, and will retain documentation to support compliance with those laws and regulations. TimkenSteel will not be liable to customer for any failure to provide goods, transfers, services or technical data as a result TimkenSteel's adherence to applicable laws or regulations, government actions, or customer's failure to follow applicable import or export laws and regulations, to the extent the same impacts TimkenSteel's ability to perform.

Documentation Considerations

Steel bar product certifications contain chemical analysis and, when requested, grain size (coarse or fine) and, as specified by the customer, are mailed, faxed, and/or included with the packing slip and sent with the steel carrier. There are no advance shipping notices unless EDI notification is requested.