

## Iron & Steel Scrap Specifications Manual

### Sales, Terms, and Conditions

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### for

## Iron & Steel Scrap Specifications Manual

### Sales, Terms, and Conditions

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## INTRODUCTION

Steel Dynamics, Inc. – Long Products Group, Engineered Bar Division supplies high quality steel to the most demanding customers within the steel industry. This steel requires raw materials used in our production process to be of the highest quality and conform to our specifications.

You, our VALUED SUPPLIERS, play an integral role in our success and ability to meet our customers' quality demands for finished products. Found within this document is the raw materials manual with specifications for ferrous scrap and iron units.

Our raw materials manual will provide our partners with quality standards for acceptable raw materials. Your efforts in applying these standards will help ensure a long continuing relationship with our suppliers of raw materials. Steel Dynamics personnel that purchase, receive, grade, or unload these raw materials are trained to apply these standards fairly and consistently to all purchased materials.

The standards used in this manual should be familiar to you and your employees as they are slightly modified versions of the Institute of Scrap Recycling Industries' (ISRI) specifications. The modification of any standard is designed to meet the needs of our melt shop here in Pittsboro, Indiana.

Thank you for being a VALUED SUPPLIER and if you have any questions regarding the Raw Materials Specification Manual, please feel free to contact us for further clarification.

Steel Dynamics, Inc.  
Engineered Bar Products  
8000 North County Road 225 East  
Pittsboro, Indiana 46167

(317) 872-7000

## GENERAL TERMS AND CONDITIONS

1. **The Purchasing of Iron & Steel Scrap** is executed by the Pittsboro Purchasing Agent and can be contacted at 317 892-7137.
2. **Prices** are quoted for each commodity primarily at the beginning of each month. Steel Dynamics reserves the right to cancel any unfulfilled contracts on the last day of the calendar month at 5:00 P.M. EST. A purchase contract with a corresponding purchase order number will be issued for specific grades and quantities to be delivered within a specified time. Balances remaining on any purchase order not shipped by the specified completion date may be cancelled or extended at the discretion of the Scrap Procurement Department. All prices are quoted in gross tons and all quantities expressed on the purchase order are in gross tons.
3. **Delivery** may be in truckload or rail at an agreed upon minimum weight as specified at the time of purchase.
4. **Scale Hours** Monday- Friday 6:00am- 5:00pm, Saturday 7am- 12pm. Scrap will not be received until 9am on the first day of every month.
5. Steel Dynamics reserves the right to modify or update the General Terms and Conditions, and the Scrap Specifications manual as required.

### Trucks – Shipping Guidelines

**Shipping Terms:** Typically prepaid unless otherwise stated in the purchase order. A rejected truck or partial rejection/reload of a truck may incur a \$250 fee.

\* If fees are not paid, they will be directly deducted from payment.

For additional truck safety please see the best practices contained in Appendix A.

**Shipment Period:** Material must be received by 5:00pm EST the last day of the calendar month stated on the contract. Steel Dynamics reserves the right at its own discretion to review the status of the contract, on the last calendar day of the month in which the scrap was purchased, at which time the contract may be cancelled or continued until the contractual obligation has ended.

**Payment Terms:** Scrap received from the 1<sup>st</sup> through the 15<sup>th</sup> is paid on the 10<sup>th</sup> of the following month. Scrap received from the 16<sup>th</sup> to the end of month is paid on the 25<sup>th</sup> of the following month.

#### Truck Equipment Requirements:

All scrap must be received in a trailer with a side-hinged rear door. Framed or frameless trailers are acceptable for all commodities. All truck drivers must be able to operate controls to raise and lower trailers from inside the cab. Truck drivers must have an operational CB radio while onsite.

Delivery carrier will be directed by SDI personnel to unloading locations.

Delivery carrier will follow all directions given by SDI personnel including restrictions due to weather.

Seller agrees that they shall be solely liable for all damages, including any clean up and/or SDI down time resulting from delivery of the product covered by this Purchase Order. Seller shall be responsible for any costs, attorney fees or any consequential damages incurred by SDI for recovery of the items due or owed by Seller under this paragraph.

Shipments will only be received at the Pittsboro mill against purchase orders where the supplier enters shipping notices via the Steel Dynamics website, <https://omni-portal.com/> and scans a unique QR code at our scales. If you are not a registered user and need to know how to sign up for a new account, visit the website for detailed instructions and videos.

**Freight Terms:** Prepaid unless stated otherwise in the purchase order. Steel Dynamics weight tickets are the governing weight for invoices.

## Rail – Shipping Guidelines

**Shipping Terms:** Typically prepaid unless otherwise stated in the purchase order. Shipments arriving at the mill without shipping notices may be assessed a \$500 fee. A rejected railcar may be assessed a \$750 fee.

\* If fees are not paid, they will be directly deducted from payment.

Failure to notice rejected loads within 24 hours of rejection notice may result in demurrage fees back charged to the Shipper.

**Shipment Period:** Material must be shipped by 5:00 P.M. EST the last day of the calendar month stated in the contract. Steel Dynamics reserves the right at its own discretion to review the status of the contract, at which time the contract may be cancelled or continued until the contractual obligation has ended.

**Payment Terms:** Scrap received from the 1<sup>st</sup> through the 15<sup>th</sup> is paid on the 10<sup>th</sup> of the following month. Scrap received from the 16<sup>th</sup> to the end of month is paid on the 25<sup>th</sup> of the following month.

### Rail Equipment Requirements:

All railcars must be fully open top railcars with vertical sidewalls and end walls with horizontal flat bottoms. Unacceptable railcars include v-troughs, belly troughs, or any interior ribs/framing. Scrap may be received in 65 ft length mill gondola cars. Coil gondolas are not accepted.

**Freight Terms:** Prepaid unless stated otherwise in the purchase order.

Consignee: Steel Dynamics, Engineered Bar Division Rail

Station: Pittsboro, Indiana

Final Rail Carrier: CSX

Max Car Limit: 286,000 lbs.

Min Car Limit: Not applicable unless Steel Dynamics is covering the freight, then the GT Min Weight will be listed.

Steel Dynamics weight tickets are the governing weight for invoices.

**Delivery Terms:** Shipments will only be received at the Pittsboro mill against purchase orders where the supplier enters shipping notices via the Steel Dynamics website, <https://omni-portal.com/>. If you are not a registered user and need to know how to sign up for a new account, visit the website for detailed instructions and videos.

## CONTRACTOR AND VISITOR SAFETY GUIDELINES

- Personal Protective Equipment must be worn onsite. Required equipment includes hardhat, safety glasses or goggles over prescription glasses, safety vests and steel-toed boots or metatarsals.
- Follow all state road laws, speed limits and other traffic controls, such as stop signs and railroad crossings and adhere to safe approach and passage distances. Come to a complete stop if your view is obstructed by steam or fog.
- Dangerous areas have signage and signals to warn of potential site hazards. Remotely activated signs will notify and warn site travelers not to enter designated areas when lights are flashing.
- Remain aware of audio warning devices – trains, auto, mobile equipment backup alarms, overhead cranes, plant start-up etc.
- Heavy equipment always has the right of way. Stay at least 40 feet back from all equipment. Continually check your surroundings and never position yourself in the blind spots or swing radius of mobile equipment (material handler, pot hauler, etc.). Do not move near equipment that has not acknowledged your presence. Stay out of tipping radius of any trailer that raises its bed to dump.
- Do not park on or near a railroad track. Maintain a clearance of 20 feet from the centerline of the railroad tracks at all times.
- All pedestrian and vehicle traffic are prohibited from going under any conveyor system when the slag plant is operating, due to the hazard of falling material.


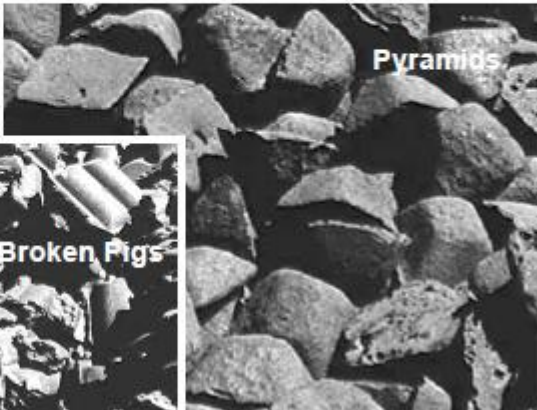

## QUALITY INSPECTION POLICY



SDI understands that iron and steel by their nature, are unique commodities, and will work with all our Suppliers to ensure our quality specifications and standards are fair and equitable. To complement our Iron and Steel Specifications Manual, SDI has implemented the following:


1. A strict inspection procedure. Every truck or railcar which enters our facility will be inspected at our scales, pass through radiation detection, and be inspected by trained inspectors when dumped or unloaded. No raw materials will be received without a purchase order.
2. Any loads failing to meet our standards or containing questionable material will be rejected. If the load is acceptable scrap, but does not match the intended purchased grade, it will be at the discretion of Steel Dynamics whether to accept the load as a downgrade or to reject the load. The decision will be made, and all the people involved will be notified. If the load is downgraded, then the Supplier must determine whether to return the load or accept the downgraded price. Ongoing rejections and downgrades are costly and inefficient for both Suppliers and Steel Dynamics.


<b>Material :</b>	Steel Scrap	<b>Grade :</b>	All	<b>SDI Part #</b>	N/A								
<b>Industry Id :</b>	ISRI #'s: N/A	<b>A.K.A. :</b>	N/A										
<b>Scope :</b>	The following general quality specifications apply to all scrap grades purchased by Steel Dynamics, Inc. for the purposes of melting at the Pittsboro, Indiana mill.												
<b>Special Definitions :</b>													
<b><u>"Downgrade"</u></b>	When a particular grade of scrap is found to not conform to its represented grade, it may, by agreement by SDI-PIT and supplier, be downgraded and accepted as an inferior grade of scrap. Refer to SOP TR-SOP-809 for downgrading procedures.												
<b><u>"Free of"</u></b>	When specified to be "free of", the grade shall not contain any amount of prohibited material in any amount greater than that which is unavoidable in the customary preparation and handling of that particular grade.												
<b><u>"Free of alloys"</u></b>	Scrap is "free of alloys" if the residual content of the elements listed below, contained within the steel, do not occur at levels consistent with the purposeful creation of an Alloy Steel. Residual level of elements contained within the Scrap shall not exceed: <table><tr><td>Chromium (Cr)</td><td>0.20%</td></tr><tr><td>Nickel (Ni)</td><td>0.30%</td></tr><tr><td>Manganese (Mn)</td><td>1.5%</td></tr><tr><td>Molybdenum (Mo)</td><td>0.10%</td></tr></table> The combined residual level, exclusive of manganese, shall not exceed 0.60%.					Chromium (Cr)	0.20%	Nickel (Ni)	0.30%	Manganese (Mn)	1.5%	Molybdenum (Mo)	0.10%
Chromium (Cr)	0.20%												
Nickel (Ni)	0.30%												
Manganese (Mn)	1.5%												
Molybdenum (Mo)	0.10%												
<b><u>"Grade"</u></b>	A classification of scrap type based upon Institute of Scrap Recycling Industries (ISRI) ferrous scrap classification or SDI-PIT / vendor description.												
<b><u>"Off-Grade"</u></b>	A load of scrap shall be considered <b>off grade</b> if it fails to meet: <ol style="list-style-type: none"><li>1. Applicable size limitations</li><li>2. Applicable requirements of material "kind"</li><li>3. Applicable requirements of material quality</li></ol> as specified in the material's (grade's) Raw Material Specification (RMS).												
<b>General Specifications :</b>													
<b>Cast Iron</b>	Unless specifically purchased as a Cast Iron or Pig Iron grade, all scrap grades shall contain less than 1% (by weight) of cast irons unless otherwise noted in the spec. This includes, but is not limited to, Cast Iron, Pig Iron, composite brake shoes, engine blocks and castings.												
<b>Cleanliness</b>	All grades shall be free of excessive rust, corrosion, dirt, oil, or grease.												
<b>Fracking Scrap</b>	All grades are to be free of gas and oil well perforation tools/piping and all other hazardous materials (e.g. explosives) associated with fracking.												
<b>Hazardous Materials</b>	All grades shall be free of hazardous materials, including, but not limited to, asbestos, electronic waste (to the extent practicable), explosives, flammable materials, hazardous waste, military scrap (including ammunition casings), oil-filled devices (e.g. transformers or capacitors), radioactive materials, or refrigerants or refrigerant-containing materials (e.g., air conditioners or condensers).-  All grades must be depleted to the extent practicable of chlorinated plastics. Materials that may contain chlorinated plastics include, but are not limited to, consumer products (e.g., carpeting, clothing, foam, furniture, Styrofoam), containers (e.g. bags, bottles, food packaging, packaging materials), or plastic motor vehicle components (e.g. battery casings, bumpers, plastic parts).  All grades must be depleted to the extent practicable of lead and lead-containing materials. Materials that may contain lead include, but are not limited to batteries, lead-based paints, gasoline tanks, metal guttering and other ferrous material, mufflers and tail pipes, wheel balancing weights, babbitt, solder, radiators, and leaded joints in soil pipe.												



<b>Hazardous Materials - Continued</b>	<p>All grades must be depleted to the extent practicable of mercury and mercury-containing materials. Materials that may contain mercury include, but are not limited to: mercury-wetted or -containing relays, switch gear, rectifiers, gauges, manometer, barometers, thermometers, and fluorescent lighting fixtures.</p> <p>All grades must be depleted to the extent practicable of organic liquids. Materials that may contain free organic liquids include, but are not limited to, oil filters engine blocks, oily turnings, oily machine shop borings, or storage drums or totes.</p>
<b>Inspection</b>	All material is to be suitable and acceptable to Steel Dynamics, Inc. based upon inspection as per TR-SOP-809.
<b>Loading/Unloading</b>	<p>All grades must be capable of being loaded and unloaded by electromagnet. Seller's indemnification includes indemnification for delivery under this Purchase Order by means of any frameless trailer. Seller agrees that it shall be solely liable for any and all damages, including any clean up and/or SDI down time resulting from Seller's utilization of any frameless trailers for delivery of the product covered by this Purchase Order. Seller shall be responsible for any costs, attorney fees or any consequential damages incurred by SDI for recovery of the items due or owed by Seller under this paragraph.</p>
<b>Motor Vehicle Shred</b>	Motor vehicle shred providers must participate in the National Motor Vehicle Switch Removal Program (NMVSRP) or another U.S. EPA-approved mercury switch removal program.
<b>Non-Ferrous</b>	<b>Non-Ferrous:</b> All grades are to be free of Non-Ferrous materials. Non-Ferrous materials include, but are not limited to, copper (electric motors, piping, compressors, wires, brass/bronze castings), aluminum, chromium (plated articles) or lead.
<b>Non-Metallics</b>	All grades are to be free of Non-Metallic Materials. Non-Metallic Materials include, but are not limited to, wood, paper, fiber, plastics, rubbers, foam, fluff, slag, concrete, dirt, or grease and oils.
<b>Off-Grade</b>	The grade shall be free of Off-Grade materials except where the vendor can demonstrate that inclusion of negligible amounts of Off-Grade materials are unavoidable in the customary preparation and handling of the grade involved.
<b>Radioactivity</b>	<p>All grades shall <u>not</u> contain radioactive materials. Scrap loads found containing radioactive sources are to be immediately rejected and managed in accordance with TR-SOP-809. Under no circumstances shall any radioactive scrap be subject to acceptance through downgrade.</p> <p>Potential radioactive items that might be found in the scrap supply include, but are not limited to, industrial gauges, industrial radiography devices, medical therapy devices, beta- or gamma- particle emitting devices, static eliminators, pipe or casing scale, contaminated metal, or welded pieces.</p>
<b>Sealed Containers</b>	<p>All grades shall <u>not</u> contain Closed, Enclosed or Sealed Containers. Such containers may be accepted providing they have been processed such that one end has been removed, a minimum of two large holes breach the "sealed" portion of the container, or the container has been cut in half. Closed, Enclosed, or Sealed Containers include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Hydraulic or gas cylinders</li> <li>• Air, Freon, Acetylene, Oxygen, Propane tanks</li> <li>• Automotive rear ends</li> <li>• Gear cases</li> <li>• Shock absorbers</li> <li>• Closed ball valves</li> <li>• Sealed units (e.g. refrigeration compressors)</li> <li>• Any vessel which contains and retains gases, oils, or fluids</li> </ul>
<b>Stainless Steel</b>	All grades shall be free of stainless steel.
<b>Tin Plate</b>	All grades shall be free of tin-plated materials.


Material :	Steel Scrap Substitute	Grade :	Pig Iron	SDI Part #	P0100820						
Industry Id :	A.K.A. : Basic Pig Iron										
Description :	<ul style="list-style-type: none"><li>Cast Iron or Blast Furnace Iron, cast into Individual "Pigs", grouped "pigs" (broken into smaller pieces), or pyramids.</li><li>Pigs' weighing-30 – 100 pounds each.</li></ul>										
Typical Appearance											
											
											
Sizing	Thickness (minimum)		≤ 8"		Typical Density						
	Maximum		28" x 12"								
Chemistry	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	
Minimum (wt%)	3.00										
Maximum (wt%)	5.00	1.20	.15	.05	1.20						
Prohibitions	In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"><li>Beach Iron</li><li>Kish</li><li>Home Scrap</li><li>Broken Castings (other than broken Pigs)</li><li>Cast Iron Castings</li></ul>										
Allowances											
Additional Notes											



<b>Material :</b> Steel Scrap		<b>Grade :</b> # 1 Bundles				<b>SDI Part #</b> P0060110					
<b>Industry Id :</b> ISIS #'s: 208		<b>A.K.A. :</b>		<b>Dealer Bundles</b>							
<b>Description :</b> • Clean Steel scrap, bushelling, clippings, sheet, or skeleton scrap compressed into a bundle											
<b>Typical Appearance</b>				<b>Typical Constituents</b>							
				Hydraulically compressed bundles consisting of: <ul style="list-style-type: none"><li>• Bushelling</li><li>• Clippings</li><li>• Punchings</li><li>• Sheet steel</li></ul> 							
<b>Sizing</b>		Thickness (minimum)		na		<b>Typical Density</b>		75 - 90 ( lbs / ft <sup>3</sup> )			
		Maximum		48" x 36" x 36"							
<b>Chemistry</b>	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	
Maximum (wt%)		1.50	.05	.05	.50	.10	.10	.10	.03	.01	
<b>Prohibitions</b> In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"><li>• Auto body stock</li><li>• Auto fender stock</li><li>• De-tinned materials</li><li>• Zinc or galvanized coated materials</li><li>• Metal coated, lined, or vitreous enameled steels</li></ul>											
<b>Allowances</b>											
<b>Additional Notes</b>											




<b>Material :</b> Steel Scrap		<b>Grade :</b> # 1 Heavy Melting Scrap				<b>SDI Part #</b>		P0010610				
<b>Industry Id :</b> ISRI #s: 200, 201, 202		<b>A.K.A. :</b> #1, #1 Steel, Heavy Melt, HMS, HMS #1										
<b>Description :</b> <ul style="list-style-type: none"><li>Clean steel scrap 1/4" thickness and over.</li></ul>												
<b>Typical Appearance</b> 					<b>Typical Constituents</b> <ul style="list-style-type: none"><li>Structural Items</li><li>Plates</li><li>Truck Parts</li><li>Large Machinery parts</li><li>Automotive Parts excluding:<ul style="list-style-type: none"><li>Gears</li><li>Transmission Parts</li><li>Torque Converters</li></ul></li></ul>							
<b>Sizing</b>		Thickness (minimum) Maximum				Typical Density				45 - 60 ( lbs / ft <sup>3</sup> )		
<b>Chemistry</b>		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	
Maximum (wt%)				.05	.05		.35	.25	.25	.06	.025	
<b>Prohibitions</b> In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"><li>Transmission parts</li><li>Torque converters</li><li>Gears</li><li>Chains</li><li>Cables</li><li>Iron dust or fines</li><li>Springs</li><li>Stainless Steel</li><li>Galvanized scrap</li><li>Reinforcing bar</li><li>Pipe with pinched ends</li></ul>												
<b>Allowances</b>		<ul style="list-style-type: none"><li>Alloy steel content must not exceed 15% by weight</li><li>Dies by SDI pre-approval</li><li>Cast Iron allowed to 10%</li><li>A few wheel rims</li><li>Gas cylinders sheared into two or more pieces allowed to 10%</li><li>A few springs</li><li>All springs must be cut to eliminate potential energy.</li></ul>										
<b>Additional Notes</b>		<ul style="list-style-type: none"><li>Pipe over 8" diameter must be split</li></ul>										



<b>Material :</b> Steel Scrap		<b>Grade :</b> # 2 Heavy Melting Scrap				<b>SDI Part #</b>		<b>P0020620</b>							
<b>Industry Id :</b> ISRI #s: 203, 204, 205, 206		<b>A.K.A. :</b> #2, HMS #2, #2 Steel													
<b>Description :</b>		<ul style="list-style-type: none"><li>Steel Scrap, black or galvanized 1/8" thickness and over.</li><li>May include automotive scrap if properly prepared (rear ends, torque converters, and transmissions must be cut and drained).</li><li>Free of sheet iron and thin gage material</li></ul>													
<b>Typical Appearance</b>								<b>Typical Constituents</b> <ul style="list-style-type: none"><li>Small Diameter Pipe</li><li>Automotive Wheel rims</li><li>Reinforcing bar</li><li>Prepared automotive parts</li><li>Post-consumer steel goods</li><li>Light-weight structural items</li><li>Small machinery parts</li></ul>							
<b>Sizing</b>		Thickness (minimum)				≥ 1/8"				<b>Typical Density</b>				40 - 55 ( lbs / ft <sup>3</sup> )	
		Maximum				36" x 24"									
<b>Chemistry</b>		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn				
Maximum (wt%)				.03	.070		.55	.20	.20	.04	.04				
<b>Prohibitions</b>		In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"><li>Municipal scrap</li><li>Turnings</li><li>Stainless steels</li><li>Tin Coated steel</li><li>Lead Coated Steel</li><li>Vitreous enameled materials</li><li>White Goods</li><li>Pipe with pinched ends</li><li>Iron dust and fines</li></ul>													
<b>Allowances</b>		<ul style="list-style-type: none"><li>Alloy steel content must not exceed 25% by weight</li><li>Cast Iron content allowed to 25% by weight</li><li>May contain undersized #1 Heavy Melting Steel if prepared for compact charging</li><li>Gas cylinders sheared into two or more pieces allowed to 10%</li><li>Reinforcing bar must not exceed 25% by weight</li><li>All springs must be cut to eliminate potential energy.</li></ul>													
<b>Additional Notes</b>		<ul style="list-style-type: none"><li>Pipe over 8" diameter must be split.</li></ul>													



<b>Material :</b> Steel Scrap		<b>Grade :</b> # 2 Bundles		<b>SDI Part #</b> P0070120							
<b>Industry Id :</b> ISRI #'s: 209, 218		<b>A.K.A. :</b> Bales, Bundles									
<b>Description :</b>		<ul style="list-style-type: none"><li>• Old Black and galvanized sheet steel hydraulically compressed into rectangular cubes.</li><li>• Unprepared #2 Heavy Melting Scrap hydraulically compressed into rectangular cubes for the purposes of increasing density</li></ul>									
<b>Typical Appearance</b>		<b>Typical Constituents</b> <ul style="list-style-type: none"><li>• "Post Consumer" goods</li><li>• "White Goods" (appliance shells)</li><li>• Used sheet goods (siding, canning stock, etc.)</li><li>• Low density # 2 Heavy Melting Steel (compressed to increase density)</li></ul>									
											
<b>Sizing</b>	<b>Thickness (minimum)</b>		<b>N/A</b>		<b>Typical Density</b>						
	<b>Maximum</b>		<b>24" x 36" x 48"</b>								
<b>Chemistry</b>	<b>C</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Si</b>	<b>Cu</b>	<b>Ni</b>	<b>Cr</b>	<b>Mo</b>	<b>Sn</b>	
<b>Maximum (wt%)</b>	<b>Maximum Chemistries are difficult to determine as content varies widely from bundle to bundle</b>										
<b>Prohibitions</b>	<b>In addition to commonly prohibited materials (PUR-SS-001), may not contain the following:</b> <ul style="list-style-type: none"><li>• Municipal Scrap</li><li>• Incinerator Scrap</li><li>• Lead Coated Steel</li><li>• Excessive fluff</li></ul>										
<b>Allowances</b>	<ul style="list-style-type: none"><li>• Vitreous enameled materials up to 15% by weight, provided the "white goods" do not contain wiring harnesses, motors, compressors, or capacitors.</li><li>• Any individual bundle may contain up to 15% reinforcing bar.</li></ul>										
<b>Additional Notes</b>											

<b>Material :</b> Steel Scrap		<b>Grade :</b> Plate and Structural Steel				<b>SDI Part #</b>		<b>P0110410</b>				
<b>Industry Id :</b> ISRI #'s: 231, 232		<b>A.K.A. :</b> P&S										
<b>Description :</b>		<ul style="list-style-type: none"><li>• Clean cut structural and plate scrap.</li><li>• Clean cut structural shape crop ends, shearings, or broken steel wheels</li></ul>										
<b>Typical Appearance</b>						<b>Typical Constituents</b> <ul style="list-style-type: none"><li>• Structural items</li><li>• Plates</li><li>• Large diameter pipe</li><li>• Heavy walled pipe</li></ul>						
<b>Sizing</b>		Thickness (minimum)			≥ 1/4"			<b>Typical Density</b>			60 - 70 ( lbs / ft <sup>3</sup> )	
		Maximum			60" x 24"							
<b>Chemistry</b>		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	
Maximum (wt%)				.04	.04		.30	.15	.15	.03	.015	
<b>Prohibitions</b>		In addition to commonly prohibited materials (PUR-SS-801), may not contain the following: <ul style="list-style-type: none"><li>• Reinforcing bar must not be present</li><li>• Mill rolls &gt; 12" Diameter must not be present</li><li>• Pipe with pinched ends</li></ul>										
<b>Allowances</b>		<ul style="list-style-type: none"><li>• Heavy Walled Pipe must not exceed 20% by weight</li><li>• This grade may be mixed with #1 Railway Scrap, provided that car sides do not exceed 20% by weight</li></ul>										
<b>Additional Notes</b>		<ul style="list-style-type: none"><li>• Pipe over 6" diameter must be split</li></ul>										


<b>Material :</b> Steel Scrap		<b>Grade :</b> # 2 Shredded Steel		<b>SDI Part #</b> P0040320							
<b>Industry Id :</b> ISRI #s: 210, 211		<b>A.K.A. :</b> Auto Shredded, Fragmentized Scrap, Shredded									
<b>Description :</b>		• Homogeneous shredded steel scrap magnetically separated, originating from automobiles, unprepared # 1 Heavy Melting Steel and # 2 Heavy Melting Steel, and miscellaneous sheet steel.									
<b>Typical Appearance</b>											
											
<b>Sizing</b>	Thickness (minimum)		N/a			<b>Typical Density</b>				55 - 70 ( lbs / ft <sup>3</sup> )	
	Maximum		10" x 10" x 10"								
<b>Chemistry</b>	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	
Maximum (wt%)			.04	.015		.32	.15	.15	.03	.015	
<b>Restrictions</b>						• Motor vehicle shredded scrap commodity providers must participate in the National Motor Vehicle Switch Removal Program (NMVSRP) or another U.S. EPA-approved mercury switch removal program.					
<b>Prohibitions</b>		In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"><li>• Municipal Scrap</li><li>• Incinerator Scrap</li><li>• Lead Coated Steel</li><li>• Vitreous enameled materials</li><li>• Tin cans</li><li>• Excessive fluff</li><li>• Copper clad or plated steel</li><li>• Iron dust and fines</li></ul>									
<b>Allowances</b>		• Cast iron content not to exceed 5% by weight. Cast iron pieces may exceed 10", but must not exceed 16"									
<b>Additional Notes</b>		• Due to the nature of processing, this grade of scrap steel will contain small quantities of copper wiring and motor windings. Total copper content must not exceed 0.32%									

<b>Material :</b> Steel Scrap		<b>Grade :</b> Busheling		<b>SDI Part #</b> P0050210									
<b>Industry Id :</b>		<b>A.K.A. :</b> #1 Busheling											
<b>Description :</b>		<ul style="list-style-type: none"><li>Clean steel scrap, including new factory busheling (for example, sheet clippings, stampings, flashings, etc.).</li></ul>											
<b>Typical Appearance</b>													
<div></div>													
<b>Sizing</b>		<b>Thickness (minimum)</b>		<b>≤ ¼"</b>		<b>Typical Density</b>				<b>60 - 75 ( lbs / ft<sup>3</sup> )</b>			
		<b>Maximum</b>		<b>36" x 60"</b>									
<b>Chemistry</b>		<b>C</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Si</b>	<b>Cu</b>	<b>Ni</b>	<b>Cr</b>	<b>Mo</b>	<b>Sn</b>		
Minimum (wt%)													
Maximum (wt%)			0.60	0.02	0.02	0.30	0.10	0.08	0.08	0.02	0.02		
<b>Prohibitions</b>		In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"><li>Old auto body or fender stock</li><li>Tin or lead-coated materials</li><li>Lined, vitreous enameled materials</li></ul>											
<b>Allowances</b>		<ul style="list-style-type: none"><li>Chemically detinned materials</li></ul>											
<b>Additional Notes</b>													



<b>Material :</b>	Steel Scrap	<b>Grade :</b>	Cast Iron Borings	<b>SDI Part #</b>	P0160820
<b>Industry Id :</b>	ISRI #'s: 220, 222, 223	<b>A.K.A. :</b>	Machine shop turnings, shoveling turnings		
<b>Description :</b>	<ul style="list-style-type: none"> <li>Clean steel turnings, wrought iron or cast iron borings, free of nonferrous metals, excessive oil, and scale.</li> </ul>				
<b>Typical Appearance</b>			<b>Typical Constituents</b>		
			<ul style="list-style-type: none"> <li>Machine shop turnings</li> <li>Cast iron borings</li> <li>Malleable iron borings</li> </ul> 		
<b>Sizing</b>	Thickness (average)		< 1/8"		<b>Typical Density</b>
	Diameter (average)				35 - 50 ( lbs / ft <sup>3</sup> )
<b>Chemistry</b>	C	Mn	P	S	Si
Maximum (wt%)			.03	.070	
<b>Prohibitions</b>	In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"> <li>Excessive oil</li> <li>Excessive rust</li> <li>Dirt or scale</li> <li>Nonferrous metals</li> </ul>				
<b>Allowances</b>					
<b>Additional Notes</b>					



<b>Material :</b> Steel Scrap		<b>Grade :</b> Briquettes		<b>SDI Part #</b> P0150910							
<b>Industry Id :</b> ISRI #s: 226, 227		<b>A.K.A. :</b> Briquetted Iron Borings, Briquetted Steel Turnings									
<b>Description :</b> <ul style="list-style-type: none"> <li>Clean steel turnings, wrought iron borings, or cast iron borings, free of excessive oil, nonferrous metals, and scale. Compressed into a high-density briquette shape.</li> </ul>											
<b>Typical Appearance</b> 			<b>Typical Constituents</b> <ul style="list-style-type: none"> <li>Steel turnings</li> <li>Cast iron borings</li> </ul> 								
<b>Sizing</b>	Thickness (average)		3 - 4"		Typical Density	40 - 55 (lbs / ft <sup>3</sup> )					
	Diameter (average)		6 - 7"								
<b>Chemistry</b>	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	
Maximum (wt%)			0.03	0.08		0.25	0.15	0.20	0.04	0.03	
<b>Prohibitions</b>	In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"> <li>Excessive oil</li> <li>Excessive rust</li> <li>Dirt or scale</li> </ul>										
<b>Allowances</b>											
<b>Additional Notes</b>											



<b>Material :</b> Iron / Steel Scrap		<b>Grade :</b> Beach Iron		<b>SDI Part #</b> P0161210			
<b>Industry Id :</b> N/A		<b>A.K.A. :</b> N/A					
<b>Description:</b> Blast Furnace Scrap / Pig Iron Scrap							
<b>Typical Appearance</b> 			<b>Typical Constituents</b> <ul style="list-style-type: none"> <li>Broken up pieces of blast furnace iron</li> </ul>				
<b>Sizing</b>	Thickness (minimum)	1.0"	<b>Typical Density</b>	200-300 lbs/ft <sup>3</sup>			
	Maximum	24"					
No pieces larger than 1700 cu in (equivalent to 12" cube)							
<b>Chemistry</b>	Fe	C	Si	P	Cu	S	Slag/Sand/Dirt
Minimum	88	2.5					
Maximum		6	1.5	0.05	0.05	0.25	5%
<b>Prohibitions</b>		In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"> <li>Broken cast iron</li> </ul>					
<b>Additional Notes</b>							

PUR-SS-815, Rev. 1

<b>Material :</b>		Steel Scrap Substitute				<b>Grade :</b>		B-Scrap				<b>SDI Part #</b>		P0190510	
<b>Industry Id :</b>		N/A				<b>A.K.A. :</b>		Ladle B-Scrap							
<b>Description :</b>		The steel/slag mixture leftover after a ladle (EAF or LMF) tear out. Commonly found on the rim of a ladle. Material is crushed before being received.													
<b>Typical Appearance</b>							<b>Typical Constituents</b>								
							<ul style="list-style-type: none"><li>EAF or LMF ladle scrap</li></ul> 								
<b>Sizing</b>		Thickness (minimum)				<b>Typical Density</b>				200-300 lbs/m3					
		Maximum													
		0.5" x 24"													
<b>Chemistry</b>		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn				
Maximum (wt%)			1.0	0.05	0.06		0.30		0.20						
<b>Prohibitions</b>		In addition to commonly prohibited materials (PUR-SS-001), may not contain the following: <ul style="list-style-type: none"><li>Dirt</li><li>Fines</li><li>Slag</li><li>Debris</li><li>Other material not identified as B Scrap</li></ul>													
<b>Allowances</b>		Ladle skulls and/or lips not to exceed 20% by weight.													
<b>Additional Notes</b>															

Material :	Steel Scrap	Grade :	# 1 Shredded Steel	SDI Part #	P0030310							
Industry Id :	ISRI #'s: 210, 211		A.K.A. :	Auto Shredded, Fragmentized Scrap, Shredded								
Description :	<ul style="list-style-type: none"><li>Homogeneous shredded steel scrap processed through a shredder and magnetically separated, originating from automobiles, appliances, heavy melting steel and miscellaneous sheet steel. All obvious nonmetallic and copper should be manually removed. Additional processing is performed to further reduce amount of copper in shredded material. Total copper content must not exceed 0.20%.</li></ul>											
Typical Appearance												
												
Sizing	Thickness (minimum) Maximum			N/a 10" x 10" x 10"		Typical Density			55 - 70 ( lbs / ft <sup>3</sup> )			
Chemistry	Fe Total	Fe Met	Cu	Cr	Mn	Ni	Sn	Mo	Si	P	S	
Minimum (wt%)	95	95	—	—	—	—	—	—	—	—	—	
Maximum (wt%)	—	—	0.20	0.15	1.50	0.20	0.02	0.03	0.20	0.05	0.10	
Restrictions	<ul style="list-style-type: none"><li>Motor vehicle shredded scrap commodity providers must participate in the National Motor Vehicle Switch Removal Program (NMVSRP) or another U.S. EPA-approved mercury switch removal program.</li></ul>											
Prohibitions	<ul style="list-style-type: none"><li>Municipal Scrap</li><li>Incinerator Scrap</li><li>Lead Coated Steel</li><li>Vitreous enameled materials</li><li>Tin cans or tin-plated materials</li><li>Copper clad or plated steel</li><li>Electric Motors</li><li>Reinforcing Bar or Rebar</li><li>Turnings</li><li>Borings</li><li>High Alloy Steel</li><li>Wire</li><li>Excessive Fluff</li><li>Nonmetallic over 1 ton or over 1 foot</li></ul>											
Allowances	<ul style="list-style-type: none"><li>Material is subject to visual inspection and visual classification, inspection for prohibited items and over/undersized material, mechanical weighing on certified scales, and radiation detection.</li></ul>											
Additional Notes	Due to the nature of processing, this grade of scrap steel will contain small quantities of copper wiring and motor windings. Total copper content must not exceed 0.20%											

## IRON & STEEL COMMODITY SPECIFICATION, SAFETY, AND ENVIRONMENTAL COMPLIANCE AGREEMENT

The undersigned seller has read and agreed to Steel Dynamics Pittsboro Iron & Steel Specification manual. This includes general terms and conditions, environmental issues, closed containers/sealed units, radioactive material, other unacceptable material, and material specifications.

The supplier acknowledges that Steel Dynamics Pittsboro may not accept any shipment in whole or in part that does not meet the conditions and specifications described within the Specifications Manual. The vendor also acknowledges that by violating this agreement they may be disqualified from supplying raw material to Steel Dynamics Pittsboro.

Although Steel Dynamics Pittsboro will exercise reasonable effort to inspect scrap shipments, materials supplied can contain elements not readily detected during normal inspection, which expose Steel Dynamics Pittsboro to hazards associated with use. Such elements may include, for example, sealed containers, radiation sources, hazardous or flammable liquids, etc. In all cases Steel Dynamics Pittsboro acceptance of any shipment shall not constitute any waiver of its rights to pursue claim of damages if subsequent use results in damage or injury to personnel or property.

I, the undersigned supplier, or authorized representative of said supplier, do hereby acknowledge receipt and understanding of the specifications and conditions of this agreement.

**Please complete and return by email upon receipt:**

Darryl McArthur [Darryl.McArthur@steeldynamics.com](mailto:Darryl.McArthur@steeldynamics.com)

Direct: (317) 892-7137

Supplier's Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Ext: \_\_\_\_\_ Mobile: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

**Radiation Detection Equipment Manufacturer Name & Model Number:**

Hand Held \_\_\_\_\_ Truck \_\_\_\_\_ Rail \_\_\_\_\_

Rail Line \_\_\_\_\_ Shipping Yard Locations \_\_\_\_\_

## NON-DISCLOSURE AGREEMENT

Dear Supplier:

Thank you for your interest in serving as a Supplier to Steel Dynamics Pittsboro. For purposes of evaluating a potential business relationship between Steel Dynamics and Supplier, Supplier has requested that Steel Dynamics furnish Supplier with certain information relating to the operations, assets, finances, transactions and general business of Steel Dynamics and its affiliates (the “Confidential Information”). Steel Dynamics agrees to provide such Confidential Information to Supplier, subject to the express terms of this agreement (“Agreement”).

For purposes of this Agreement, Confidential Information shall include but not be limited to all data, reports, records, trade secrets, financial statement and projections, customer and supplier identities and information, and/or other information and materials, whether in written, oral, electronic or other format, disclosed to Supplier both prior to and subsequent to executing this Agreement; in addition to any analyses, notes, reports, memoranda, work papers or work product prepared by Supplier or any of Supplier’s employees, agents or representatives (“Supplier Representatives”) derived from, based upon or containing Confidential Information. Confidential Information shall be expressly included in the fact that Steel Dynamics and Supplier are contemplating a business relationship and the fact that Supplier has been permitted access to Confidential Information.

In consideration of Steel Dynamics furnishing the Confidential Information, Supplier agrees to the following:

1. Supplier shall maintain such Confidential Information in strict confidence. Supplier shall not, directly or indirectly, disclose the Confidential Information to any other person or entity without the written consent of an authorized Officer of Steel Dynamics; provided, however, Supplier may disclose Confidential Information (a) subject to Section 3 of this Agreement, to those of Supplier’s Representatives that have a need to review the Confidential Information to assist Supplier in evaluating the business relationship; and (b) subject to Section 7 of this Agreement, if required by law or valid legal process.
2. Supplier shall not use Confidential Information for any purpose other than in connection with the business relationship and shall not use Confidential Information in any manner that exploits or disadvantages Steel Dynamics or benefits any third party.
3. Supplier shall inform Supplier Representatives of Supplier’s obligations under this agreement and will obligate Supplier Representatives to abide by the terms of this Agreement. In any event, the actions and omissions of Supplier Representatives shall be deemed by actions of Supplier with respect to the Confidential Information and, Supplier agrees that it is liable for any breach of this Agreement by Supplier Representatives. The supplier acknowledges and agrees that any unauthorized use or disclosure of the Confidential Information shall constitute a material breach hereof and shall cause irreparable harm and loss to Steel Dynamics and its affiliates.
4. Upon Steel Dynamics request, Supplier shall either destroy or return to Steel Dynamics (at Steel Dynamics election) all Confidential Information (including all copies thereof) in possession of Supplier or Supplier Representatives.

5. Supplier shall take such action within five (5) business days of any such request and upon request of Steel Dynamics, shall supply Steel Dynamics with a written certification that Supplier has fulfilled its obligations under this Section 4.
6. Supplier shall acknowledge and agrees that Steel Dynamics is the exclusive owner of the Confidential Information, including all intellectual property rights contained therein. No license or conveyance of any such rights is granted to Supplier or implied under this Agreement.
7. If Supplier and/or Supplier Representatives are required by law or valid legal process to disclose any of the Confidential Information, Supplier shall provide Steel Dynamics with prompt written notice so that Steel Dynamics may seek a protective order or other appropriate remedy and/or waive compliance with the provisions of this Agreement for purposes of such limited disclosure. If, in the absence of a protective order or the receipt of a waiver by Steel Dynamics, Supplier and/or Supplier Representative are nonetheless required to disclose Confidential Information, Supplier and/or Supplier Representatives may, without liability hereunder, disclose only that portion of the Confidential Information which, in the opinion of its respective counsel, is legally required to be disclosed.

Supplier understands that Steel Dynamics makes no representations or warranties regarding the accuracy or completeness of any Confidential Information. Supplier agrees that Steel Dynamics shall have no liability to Supplier or any Supplier Representative arising out of or in connection with the Confidential Information.

It is further understood that Steel Dynamics has appointed Kurt Terandy, or his designee ("Agent") as its contact person for purposes of this Agreement. Supplier agrees that it shall direct all communications and requests for information regarding Steel Dynamics through Agent or Agent's designated legal counsel. Supplier understands that unless specifically authorized by the Agent, Supplier and Supplier's Representatives may not contact any other employee, or representative of Steel Dynamics. In addition, Supplier and Supplier Representatives shall be prohibited from contacting any of Steel Dynamics customers or Suppliers unless they first receive written authorization from Agent or an authorized Officer of Steel Dynamics.

Supplier further acknowledges and agrees that Steel Dynamics shall have no obligation to authorize or pursue a business relationship with Supplier or any other party. Steel Dynamics shall be free to pursue a potential business relationship with any party, as Steel Dynamics in its sole discretion shall determine.

This Agreement shall remain in full force and effect for so long as Supplier has access to any Confidential Information, and for a period of five (5) years thereafter. In the event of any breach of this Agreement by Supplier or Supplier's Representatives, Steel Dynamics, and its affiliates, (in addition to and not in lieu of any other remedies at law or in equity that it may have), shall be entitled, without the requirement of posting a bond or other security, to equitable relief, including injunctive relief and specific performance.

This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of Indiana, without regard to its conflicts of law rules. In any action to enforce this Agreement, the prevailing party shall be entitled to recover its reasonable attorney's fees and costs. If any portion of this

agreement shall be deemed unenforceable, the balance of this Agreement shall remain enforceable and be interpreted as if the unenforceable provision is deleted from this Agreement. This Agreement shall bind Supplier's successors and assigns, and any assignment of this Agreement by Supplier without prior written consent of Steel Dynamics shall be void. This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and may be amended or modified only in a written instrument executed by the parties hereto.

If Supplier agrees with the foregoing, please sign and return one copy of this Agreement to Steel Dynamics, which thereupon will constitute an Agreement between parties, each intending to be legally bound, with respect to the subject matter hereof.

Very truly yours,

Steel Dynamics, Pittsboro, Indiana

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

ACCEPTED AND AGREED TO:  
SUPPLIER

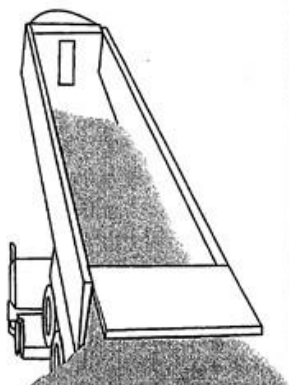
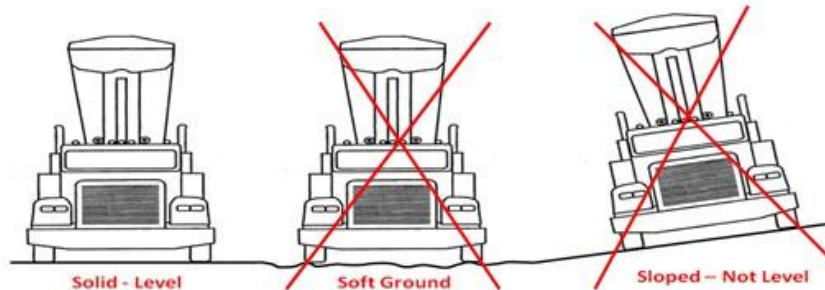
BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

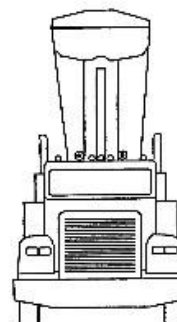
COMPANY: \_\_\_\_\_

Date Signed: \_\_\_\_\_

## **DUMP TRAILER TURN OVER PREVENTION** SIDE 2 **NO EXCEPTIONS ZERO TOLERANCE**



Before dumping verify that the load has not shifted in transit.



Do not dump or raise the trailer for any reason with high gusty winds.

## **TOWING AND RECOVERY CALL LIST FOR RECLAIM**

**Zore's Towing – [zorestowing.com](http://zorestowing.com) – 317.247.8484**

**Ploughe Wrecker Service – Pittsboro – 317.892.7334**

## APPENDIX A: DUMP TRAILER TIP-OVER PREVENTION PROGRAM



**SDI** *Steel Dynamics, Inc.*

### Dump Trailer Tip-Over Prevention Program

Suggested Preventive Maintenance Best Practices

## Dumping Equipment Safety

### Critical Inspection Points – Roll-Off Trailers & Dump Trailers

#### Trailer/Container Door Condition

- Check all welds for breaks and/or corrosion
- Maintain (grease) and inspect all hinges
- Maintain (grease) and inspect all chains/binders



## Dumping Equipment Safety

### Critical Inspection Points – Roll-Off Trailers & Dump Trailers

#### Rear Suspension / Trailer Frame:

- Check all airbags for proper inflation (free of leaks).
- Ensure all mounting brackets are free of corrosion.
- Ensure all lines to airbags are in good condition (free of chafing or leaks)



- Ensure there are no broken:
  - Springs
  - Spring Center Bolts
  - Shackle Bolts



- Ensure all hinge/dump pins are maintained, lubricated and in good condition (free of cracks and/or excessive wear)



## Dumping Equipment Safety

### Critical Inspection Points – Roll-Off Trailers & Dump Trailers

#### Rear Suspension / Trailer Frame - Continued:

- Ensure tires are properly inflated. Ensure rims/wheels are free of cracks, breaks and missing/broken lugnuts.



- Ensure the frame of the dump trailer or roll-off container has no breaks in the frame. Ensure all bolts and welds are in good condition and properly securing the trailer or roll-off frame to the chassis of the trailer.



## Dumping Equipment Safety

### Critical Inspection Points – Roll-Off Trailers & Dump Trailers

#### Dump Tub / Trailer Frame:

- Inspect and maintain dump tub properly to ensure it's free of breaks, cracks, broken welds and broken mounting brackets.
- Ensure all cylinder mounts are properly lubricated and free of cracks or breaks.
- Ensure all cylinder pins are visibly in place and not working their way out of their mounts.



## Dumping Equipment Safety

### Critical Inspection Points – Roll-Off Trailers & Dump Trailers

#### Dump Tub / Trailer Frame - *continued*:

- Inspect all hydraulic cylinders, fittings, hoses and valves for blown, bulging or leaking seals.



- Ensure all rollers on a roll-off trailer have a retaining bolt or cotter key present in order to prevent the loss of a roller.



## Dumping Equipment Safety

### Critical Inspection Points – Roll-Off Trailers & Dump Trailers

#### Landing Gear & Fifth Wheel Area:

- Inspect all landing gear bolts, brackets and welds for excessive wear and/or corrosion. Ensure all bolts are tight, not allowing the landing gear to move while in use.
- Ensure fifth wheel plate is free of cracks and that the fifth wheel pin is secure and in good condition.
- Check hydraulic fittings for cracks, leaks or missing parts.



# Suggested Material Loading Practices

Scrap metal bundles should be loaded with a grapple or magnet in order to ensure even distribution of material.

**Evenly Loaded Trailer – Best Practice**



**Unevenly loaded trailer – Tip over Risk**



# Suggested Material Loading Practices

Plate & Structural-type material should be loaded with a grapple or magnet in order to ensure even distribution of material.

## Evenly Loaded Trailer – **Best Practice**



## Unevenly Loaded Trailer – **Tip Over Risk**

**Unnecessary Void**



# Suggested Material Loading Practices

Busheling-type material should be loaded with a grapple, magnet or conveyor in order to ensure even distribution of material.

Evenly Loaded Trailer – **Best Practice**



Unevenly loaded trailer – **Tip over Risk**

**Unnecessary Void**



# Suggested Material Loading Practices

Turnings and Borings should be loaded with a conveyor, magnet or loader in order to ensure even distribution of material.

Evenly Loaded Trailer – **Best Practice**



Unevenly loaded trailer – **Tip over Risk**



# Suggested Material Loading Practices

Shredded scrap should be loaded with a magnet or loader in order to ensure even distribution of material.

## Evenly Loaded Trailer

**Best Practice**







## Unevenly Loaded Trailer

**Tip over Risk**



## APPENDIX B: EXAMPLES OF NON-CONFORMING OR OFF-SPEC MATERIALS

#1 Busheling	NONCONFORMANCES SUBJECT TO REJECTION
<div>1. Low Density, Tangled Material</div> <div></div> <div></div> <div></div> <div></div>	

**#1 Busheling (cont.)**

**NONCONFORMANCES SUBJECT TO REJECTION**

**1. Tangled and Oversize length and/or thickness**



## Bundles Commodities

## NONCONFORMANCES SUBJECT TO REJECTION

### 1. Wire, Copper Wire, Rebar, etc.



### 2. Nonmetallics, Fines, Millscale, Dirt, etc.



**Miscellaneous**

**NONCONFORMANCES SUBJECT TO REJECTION**

**1. Nonmetallics, Dirt, Yard Clean-ups, etc.**



## APPENDIX C: CALCULATING THE BULK DENSITY OF DELIVERED SCRAP

**1. Determine the cubic feet volume of the truck trailer or railcar.**

Measure the inside length, width, and height of the truck trailer or railcar in feet. Multiply these three numbers.

$$\text{Railcar Volume} = \text{Length} \times \text{Width} \times \text{Height} = 52.5 \text{ feet} \times 9.5 \text{ feet} \times 5.5 \text{ feet} = 2,743 \text{ cubic feet}$$

**2. Determine the total pounds of scrap in the truck trailer or railcar.**

Subtract the tare weight of the truck trailer or railcar from the gross weight of the truck trailer or railcar.

$$\text{Scrap Weight} = \text{Railcar Gross Weight} - \text{Railcar Tare Weight} = 170,000 \text{ lbs} - 68,000 \text{ lbs} = 102,000 \text{ lbs}$$

**3. Estimate the percentage of the truck trailer or railcar that has been filled with scrap.**

Visually estimate the fullness of the truck trailer or railcar from a range of 0 to 100%.

$$\text{Railcar Fullness} = 75\%$$

**4. Calculate bulk density of the scrap in the truck trailer or railcar using previously determined data.**

Multiply the truck trailer or railcar volume by the truck trailer or railcar fullness to estimate scrap volume.

$$\text{Scrap Volume} = \text{Railcar Volume} \times \text{Railcar Fullness} = 2,743 \text{ cubic feet} \times 75\% = 2,057 \text{ cubic feet}$$

Then divide the scrap weight in the truck trailer or railcar by the scrap volume in the truck trailer or railcar.

$$\text{Bulk Density of Scrap} = \text{Scrap Weight} / \text{Scrap Volume} = 102,000 \text{ lbs} / 2,057 \text{ cubic feet} = 50 \text{ lb/ft}^3$$

**5. Compare the calculated bulk density of the scrap with the minimum density specification.**

The estimated bulk density of the delivered scrap is 50 lb/ft<sup>3</sup>. Compare this value to the minimum density specified for the corresponding scrap commodity outlined in the *Iron & Steel Scrap Specifications Manual* to determine if the load is within conformance. Downgrade or reject the load if it does not meet the minimum density specification for the corresponding scrap commodity.

As an example, had this railcar been a delivery of #1 Shredded scrap, it would not pass the minimum density specification of 58 lb/ft<sup>3</sup>. The scrap inspector would then evaluate whether this load could be downgraded to #2 Shredded scrap at a minimum density of 50 lb/ft<sup>3</sup>. After inspecting the railcar, it was determined that the load contains more than 5% non-ferrous and non-metallics. This violates one of the prohibited items in the #2 Shredded specification which therefore warrants the rejection of this railcar.