

1. GENERAL SCRAP SPECIFICATIONS

ALL SCRAP IS TO BE PREPARED IN A MANNER TO ENSURE A DENSE, COMPACT, CHARGE AND MUST EASILY BE HANDLED BY A MAGNET.

- **Cleanliness:** All Scraps consignments / deliveries **MUST BE FREE** from contaminants, including dirt, cast iron, lead, lead weights, tungsten inserts, tungsten bits, non-ferrous metals, excessive rust and corrosion, or any other foreign material. However, the terms "free of dirt, non-ferrous metals, or foreign material" do not prohibit the accidental inclusion of negligible quantities, provided it can be demonstrated that such inclusion is unavoidable during the customary preparation and handling of the specific grade in question.

Qatar Steel will not accept any waste or steel by-products such as mill scale, slag, shot, grinding dust or scarf.

- **Off-Grade Material:** The inclusion of a negligible amount of metallic material in a shipment of a specific grade of iron and steel scrap, which slightly exceeds the applicable size limitations or marginally fails to meet the required quality or type specifications, shall not alter the classification of the shipment.

This exception applies provided it can be demonstrated that the inclusion of such off-grade material is unavoidable during the standard preparation and handling processes for the specific grade involved. The final determination of these occurrences is at the sole discretion of appropriate yard inspectors involved in the inspection and unloading of scrap raw materials at the receiving yard.

- **Drums:** Drums (including buckets and barrels) of any size will not be accepted as scrap unless it can be demonstrated that they do not contain any hazardous materials and have been completely cleaned. All drums must be clean and empty and must not contain any residuals and shall be mechanically pressed with a single puncher hole on the surface.
- **Oil Filters:** Qatar Steel prohibited from accepting used oil filters, in any condition, commingled with other scraps unless the filters are fully drained from residual oils with no visible or free flowing oil and mechanically crushed.
- **Airtight Scraps:** Closed containers and sealed units are a serious explosion hazard. All air-tight material must be cut in accordance with the following instructions [**APPENDIX II**]
 - 1.Cylinders must be cut lengthwise and have a through hole that is at least twice the diameter of the cylinder.
 - 2.Other airtight materials should also have a through hole that is at least twice their diameter.
 - 3.For long scrap pieces exceeding 700mm, at least two holes should be made, each at least twice the diameter of the material.
 - **All propane tanks or fire extinguishers must be cut in half.**
 - **Empty "loose" steel gas tanks which are visibly "ripped", properly drained of all fluids and must be logged or baled, crushed or flattened**
- **Trailer Sweepings:** Any load containing excessive dirt or other contamination will be subject to rejection, or a deduction may be made from the supplier's payment to compensate for the handling and disposal of the unwanted material.

2. DANGEROUS ARTICLES

All delivered scrap consignments shall be free from any dangerous articles. In the event of positive identification of fugitive explosives and ammunition scraps or radioactive scraps during delivery or inspection process, a strict, hazard-controlled inspection procedure must be followed to ensure the safety of personnel and equipment.

Fugitive explosive scraps refer to materials in scrap metal shipments that may contain or have previously contained explosive substances, but are not limited to gas cylinders, shock absorbers, bombs, bullets, or any airtight, pressurized, or hazardous containers.

Scrap containing hazardous materials (e.g., asbestos, radioactive materials) is strictly prohibited and will be rejected immediately. Any scrap found to be contaminated with harmful or illegal substances during inspection will be returned at the supplier's expense.

3. PROHIBITED SCRAPS.

- E-waste and Electronics - such as Cell phones, electronic components, any Computers, TV's, wires, Controllers, Printers, Printer rolls, and other materials
- Radioactive Materials of any kind.
- Hazardous Materials - such as Oil, Paint, Antifreezes, Powders, free or attached Asbestos or Asbestos. containing products, and Fertilizers.
- Corrosives - such as Batteries, containers with Acid or Base Residue.
- Compressed Gas Cylinders and other containers holding or formerly containing Flammable, Pressurized or Combustible Materials such as fire extinguishers, Process vessels, bulk Storage Tanks.
- Lead and other Heavy Metals.
- Other Hazardous Wastes - such as Pesticides, Poisons, used Oil filters, Mercury-containing materials such as Switches and Thermometers, Biohazards, Fluorescents Lights, Tube toss.
- Refrigerants - such as Freon/Puron/Substitutes, Compressors, Air Conditioners, Refrigerators, Freezers.
- PCBs - such as Capacitors, Transformers, Ballast.
- Explosives - such as Firearms, Ammunition, Shells, Fireworks, used Gasoline Cans.
- Medical Waste - such as Needles, Syringes, Biohazard-labeled Containers, etc.
- Other Hazardous Materials which may harm human health or cause property/workplace damage.
- Green wastes- Plant, Wood, Leaves, Fruits, Vegetables and other Vegetative matter.
- Inert construction materials- such as Rock, Dirt, Asphalts, Concrete, Debris, Roofing, Dry Wall, etc.
- Bulk and Gross Materials Not Recyclable such as Tires, Fiberglass, Wood, Asbestos.
- Appliances, Furniture, Ceramics, Rags, Air Bags, common Light Bulbs, Crystal, Plate & Mirror Glass, other Solid Wastes.
- Free Flowing Liquids of any kind.

4. CHEMICAL COMPOSITION.

The presence of residual alloys in steel scrap must not exceed the following percentages:

- Nickel : 0.45%
- Chromium : 0.20%
- Molybdenum : 0.10%
- Manganese : 1.65%

The combined total of residual alloys, excluding Manganese, must not exceed 0.60%.

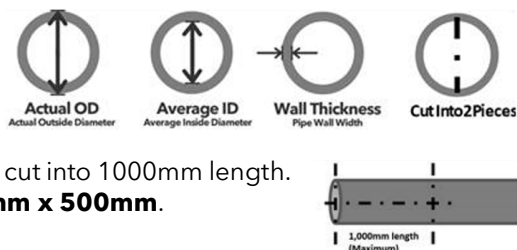
5. SCRAP SPECIFICATIONS

[Domestic Deliveries]

5.1 Heavy Melting Steel.

(Equivalent to ISRI Code No. 200 - No.1 Heavy Melting Steel, ISRI Code No. 203- No.2 Heavy Melting Steel except size)

- All HMS 1 & 2 scraps shall be classified under Heavy Local HMS **(80:20)** regardless of the thickness.
- Individual pieces not over 1500mm x 1000mm prepared in a manner to ensure compact charging.
- Steel pipes whose diameter is more than 300mm are to be cut open in two pieces (Length 1000mm maximum) along the length of the pipes.
- Steel pipes whose diameter is less than 300mm are to be cut into 1000mm length.
- Steel Plates are to be cut to sizes not more than **1,000 mm x 500mm**.



5.2 Bundle Scraps :

(Equivalent to ISRI Code No. 208 - No.1 Bundles ,Code no. 209 - No.2 Bundles, Code No.214 - No.3 Bundles & Code No. 215 -Incinerator Bundles).

- All bundle scraps shall be classified under Heavy Local HMS **(80:20)** upon approval from the Raw Material Department.
- New black steel sheet scrap, clippings or skeleton scrap, compressed or hand bundled to charging box size (1500 mm x 600 mm), and weight is not less than 1.2 tons per cubic meter.
- Hand bundles shall be tightly secured for handling with magnets and may not include old auto body or fender stock.
- Free of metal coated, limed, vitreous enameled and electrical sheet containing over 0.5 percent of silicon.
- It shall not include tin or lead - coated material or vitreous enameled material.

5.3 Cast Iron / Engine Blocks :

- All Cast Iron / Engine block shall be booked under **HMS PO criteria Local HMS (80:20)**
- Cast Iron Scrap; not over 1500 mm x 1000 mm x 600 mm
- Oversize scrap shall be cut, drop - broken or crushed to satisfy the above size.
- The weight of each piece is not more than 1000 kg per piece.
- Cast Iron Scrap is to be separated from Steel Scrap and is to be supplied separately (Steel Scrap and Cast-Iron Scrap are not to be mixed). In the case of Auto Cast i.e., Engine Block.
- Cast Iron, such as engine block, cylinder block and cylinder head shall be separated. These are to be free of grease and oil, non - ferrous and non - metallic material (i.e., free of all non - magnetic material) and free of all steel parts except cam shafts, valves, valve springs and studs.

5.4 Shredded Scraps :

(Equivalent to ISRI Code No. 210/211 - Shredded Scrap)

- Homogeneous iron and steel scrap magnetically separated, originating from automobiles, unprepared No. 1 and No.2 steel, miscellaneous bailing and sheet scrap.
- Average density 0.80 - 1.12 tons per cubic meter.
- All Shredded Scrap shall be booked under **separate PO criteria**.

Any steel scrap that does not meet the criteria for these grades will be classified as Off-Grade. For Accepted Scrap metal listing [APPENDIX I]

6. INSPECTIONS OF SCRAPS

- Every truck which enters our facility shall pass through radiation detection installed at our weighing bridge and shall be visually inspected by trained personnel at receiving yards.
- Weighing and quality booking at QS internal weighing bridge will be carried out by Qatar Steel at its plant site, and the results will be considered final.
- **Any loads failing to meet our standards, as outlined, will be rejected.**

The following is considered serious and requires all suppliers' attention:

1. Top dressing and mill scale additions, "salting the load", are deliberate misrepresentations of the material being supplied.
2. Sealed units/closed containers represent an explosion hazard.
3. A significant amount of non-ferrous can result in off-grade chemistry of the steel.
4. Radioactive material.

7. REFERENCES:

- Ferrous Scrap Metal listings in detail can be found under - Appendix I
- Airtight & pressure vessel cutting requirements - Appendix II

APPENDIX I

Ferrous Scrap Metal Listings.

1. Plate & Structural (P&S)

Shall consist of new and used structural and plate steel scrap including **steel plates, structural shapes, flats, I-Beams, and other Shearing's.**

- Shall be a minimum of 6mm in thickness.
- Shall be a maximum of **1000mm X 500mm** with no one piece weighing more than **500 Kgs.**
- Must be free of all nonferrous metals and non-metallic materials including concrete, wood, or other demolition debris.

2. Mixed Rail

- Shall consist of new and used railroad track sections.
- Rail track must be a minimum of **30 Kgs.**
- Rail track must be in straight sections with a minimum length of 1 meter per continuous section. May not include manganese rail frog sections, or other railroad scrap.

3. HMSS-1

- Shall consist of new and used wrought steel scrap **6mm** and over in thickness.
- Individual pieces not to exceed **1500mm X 1000mm.**
- Maximum weight per piece not to exceed above **1000 Kgs/ piece.**
- May not include motor blocks, appliances, cylinders, closed or sealed units, electric motors, compressors, gas tanks, mufflers, shock absorbers, chain link fence, or non-metallics.
- May contain up to 20% of HMS2 (material **3mm to 6mm** in thickness).

4. HMSS-2

- Shall consist of new and used wrought steel scrap **3mm to 6mm** and over in thickness.
- Individual pieces not to exceed **1500mm X 1000mm.**
- Maximum weight per piece not to exceed **1000 Kgs / piece.**
- May not include appliances, cylinders, closed or sealed units, electric motors, compressors, gas tanks, mufflers, shock absorbers, chain link fence, or non-metallics.

5. Bundles-1

- Shall consist of new production low residual steel scrap sheet and clippings, free of coatings, and condensed into bales suitable for mill or foundry application.
- Bale density must be a minimum of **35kgs** /cubic foot.

6. Bundles-2

- It shall consist of new and used sheet steel and light iron products, densified into bales, and suitable for shredding or for a steel mill application.
- May not include tin or lead-coated (terne plate) material.

7. Tin Cans

- Shall consist of new and post-consumer tin plate and tin can stock, tin cans, and lids. Post-consumer tin cans should be relatively free of waste.
- May be purchased loose or in baled form. May include paper labels.

8. Mixed Cast

- Shall consist of cast Iron from automobiles, trucks, agricultural, and machinery parts and equipment with wall thickness up to **3mm maximum.**
- May include automobile drums, rotors, heads and blocks, manifolds, machine bases, and plow disks. May include up to 5% steel attachments per piece in the form of bolts, rods, etc.
- May not include cast iron with lead or other nonferrous attachments.

9. Brake Drums & Rotors

- It shall consist of Cast Iron drums and rotors from automobiles and trucks only. No other types of casts or steel are allowed in this grade.
- May not include any other parts or attachments except for steel studs in rotors.

10. P&S Unprepared

- It shall consist of new and used structural and plate steel scrap including steel plates, structural shapes, flats, I-Beams, and other Shearing's too large to meet size limits for category 1020.
- Shall be a minimum of **6mm** in thickness.
- Material must be shearable by standard mechanical operations.
- Must be free of all nonferrous metals and non-metallic materials including concrete, wood, or other demolition debris.

11. Auto Bundles - 1

- Shall consist of new production auto stampings be bailed in a form useable by a steel mill. Minimum density shall be **35 Kgs per cubic foot**.

12. Billets

- Semi-finished steel solids with a square or round cross section of less than 36 square inches, from steel making or the secondary market.
- Diameters, lengths, and chemistry will vary by piece or lot.

13. Dismantled Railroad Cars

- Whole or partial railroad cars to be cut for scrap and usable components.
- May include tankers, box, gondola, or other rail cars.

14. Torch Cut

- Shall consist of any steel scrap that is too large to be cut in standard portable or stationary shredder, shear, or other mechanical means.
- This material must be cut to size using torching with a variety of gas and oxygen generated flames.
- May include large machinery, heavy plates and bars, and large castings.
- Must be free of excessive grease and drained of all oils.

15. Unprepared-1

- Shall consist of new and used wrought steel scrap 6mm and over in thickness. This material is too large to fit size limits for inventory items 1040 (HMS1).
- May not include motor blocks, appliances, cylinders, closed or sealed units, electric motors, compressors, gas tanks, mufflers, shock absorbers, chain link fence, or non-metallics.
- May contain up to 20% of HMS-2 (material **3mm to 6mm** in thickness).

16. Unprepared Rebar Tangles-2

- New or used steel rebar scrap that is bent and/or intertwined in a manner that does not allow for easy cutting or processing.

17. Breakable Cast

- Oversize Cast Iron scrap that is too large for standard foundry applications (over 1500mm in length or width) and under 500mm in wall thickness.
- May include large castings, machine bases, and other cast parts generally over 500mm in thickness.

18. Cast Unprepared Heavy

- Oversize Cast Iron scrap that is too large for standard foundry applications and processing. Material that is too large to be broken or cut to meet a standard foundry application.
- May include large castings, machine bases, and other cast parts generally over **1000mm** in length or width and over **3mm** in wall thickness.

19. Busheling

- New production steel clippings and stampings.
- May include a mix of black uncoated steel as well as steel that is galvanized, galvanized and aluminized.
- May not include tin plated, terne plated (lead coated), vitreous enameled, or electrical steels (maximum 0.5% silicon). Maximum size allowable is **5mm**.
- It must be free of paint and plastic coatings.

20. Turnings

- Clean steel or wrought iron turnings, free of cast iron borings, nonferrous metals in a free state, scale, or excessive oil.
- May not include rusted or corroded stock.

21. Unprepared Busheling

- New production steel clippings and stampings too large to ship to a consumer without further cutting or processing.
- May include a mix of black uncoated steel.
- May not include tin plated, terne plated (lead coated), vitreous enameled, or electrical steels (maximum 0.5% silicon).
- It must be free of paint and plastic coatings.

22. Motor Blocks

- Whole or partial engine blocks from automobiles and trucks from which steel and nonferrous fittings and parts may or may not have been removed.
- It must be free from drive shafts and all frame parts. May include transmissions.
- Must be drained of all fluids and relatively free of excess grease and oils. May not include large tractor or heavy equipment motors.

23. Galvanized Sheet

- Clean sheet steel and new production coated steel clippings and stampings. May include steel that is galvanized, galvanized and aluminized.
- May not include tin plated, terne plated (lead coated), vitreous enameled, or electrical steels (maximum 0.5% silicon).
- May not include nonferrous or nonmetallic.
- It must be free of paint and plastic coatings.

24. Shredded Ferrous

- Prepared homogenous iron and steel scrap, magnetically separated, originating from automobiles, unprepared #1 and #2 steel, miscellaneous baling and sheet scrap.
- Average density of **30 Kgs per cubic foot**.
- Must be free of Automobile Shredder residue (ASR), nonferrous, and nonmetallic materials.

25. Car Bodies

- Automobile bodies that may or may not include engines, transmissions and other original components.
- Must include car frames and axles.

26. Tin

- Light steel and sheet up to 3mm in thickness.
- May include new or postconsumer scrap in a variety of shapes and forms.
- May include a de-minimum number of nonmetallic attachments that are not hazardous including plastic, nonferrous, fabric, and other parts and pieces.

27. Incinerator Scrap

- Scrap steel magnetically or mechanically separated as part of the residue of a commercial incineration processing plant.
- May include any nonhazardous steel and cast-iron components and parts.

- May include a de-minimum coating of ash or residue from the burning process.

28. Other Shredded Ferrous

- Steel tire wire scarp or Tire derived steel (TDS) is a light melting scrap obtained during the shredding process of waste tires. It is formed by thin and shredded wires, containing different grades of fiber and rubber
- Clean, shredded tire wire. Wire needs to be less than 6" in length. Rubber content needs to be 5% or less.
- Should be delivered in jumbo bags or skips.

APPENDIX II

Airtight & pressure vessel cutting requirements.

