
Metal Scrap Management

1. Purpose

This regulation is formulated to standardize the classification, collection, temporary storage, recycling and disposal procedures of waste materials generated during sheet metal production, including metal offcuts, surplus stock, metal chips and scrapped non-conforming products. It implements the plant-wide solid waste management requirements of waste reduction, resource recovery and harmless treatment, eliminates risks of mixed stacking, random piling, material loss and environmental violations, and ensures a tidy, compliant and controllable production site.

2. Scope of Application

This regulation applies to the classification, recycling, warehousing, handover, disposal and ledger traceability management of all metal offcuts, surplus plates, metal scraps, scrapped workpieces, defective scrap generated from all sheet metal workshop processes (laser cutting, bending, welding, grinding, machining), as well as discarded auxiliary production materials.

3. Management Responsibilities

Production Department

Responsible for on-site real-time sorting, fixed-point collection, zoned placement and daily cleaning of production scrap. Prevent mixing of different materials and avoid scrap being mixed into domestic garbage.

Warehouse / Material Department

Responsible for standardized temporary storage, classified stacking, inbound & outbound registration, weighing statistics and ledger management in dedicated scrap zones, and completing handover formalities with compliant recyclers.

Quality Department

Responsible for identification and labeling of scrapped defective workpieces,

distinguishing process scrap from quality reject scrap, and supervising compliance of scrap classification.

Administration & EHS Department

Responsible for environmental compliance control of plant solid waste, qualification review of recyclers, supervision of compliant scrap disposal, and retention of environmental protection and recycling archives.

Operators of All Processes

Shall place scrap strictly in accordance with classification standards and clean up waste generated at their own stations. Random discarding, material mixing and privately removing scrap off-site are prohibited.

4.Scrap Classification Standards

Scrap shall be categorized strictly by material type, form and reusability, with homogeneous materials gathered together and dissimilar materials isolated. Mixing carbon steel, stainless steel and aluminum alloy is forbidden, as material contamination will reduce recycling value and cause quality risks.

4.1 Reusable Surplus Plates (Internal Production Reuse)

Complete, undeformed, rust-free and intact leftover plates and regular large blocks that can be used for small-batch sampling, prototype trial production and small component manufacturing.

Including standard regular surplus sheets and long strips of cold-rolled steel, galvanized steel, stainless steel and aluminum plates.

Disposal: Store separately in dedicated zones with labels indicating material grade & specification; prioritize scheduling them for internal production. Maintain requisition ledgers to minimize raw material consumption.

4.2 Recyclable Metal Offcuts (Unusable for Internal Production, for External Recycling)

Metal scrap that cannot be reused in production but has recycling value, stored strictly by material type:

Carbon Steel Scrap: Offcuts and cutting fragments of cold-rolled steel, hot-rolled steel, ordinary iron plates and galvanized steel; scrapped frames and brackets.

Stainless Steel Scrap: Offcuts, cutting chips and scrapped stainless steel workpieces of grade 201, 304 and 316 (sub-zoned storage for

different grades where possible).

Aluminum Alloy Scrap: Offcuts of aluminum sheets & extrusions, scrapped aluminum structural parts and aluminum chips.

4.3 Fine Metal Dust & Chips

Laser cutting dust, fine metal particles from grinding & polishing, tiny metal powder from drilling and tapping. Collect in sealed containers separately; mixing with large offcuts is forbidden to avoid dust pollution and material cross-contamination.

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Laser cutting dust, fine metal debris generated during grinding and polishing, and tiny metal powder from drilling and tapping shall be collected separately in sealed containers. Mixing with large metal offcuts is prohibited to avoid dust pollution and cross-contamination of different metal materials.

4.4 Scrap from Rejected Non-Conforming Products

Out-of-tolerance workpieces, deformed scrapped parts, welding-defective scrap, and finished/semi-finished goods rejected due to coating defects that are deemed unrepairable by the Quality Department shall be uniformly labeled as "Scrapped Defective Materials" and placed into the corresponding scrap zones sorted by material type.

4.5 Other Production Waste (Stored Separately)

Non-metallic waste including discarded packaging, protective film, EPE foam, wood scraps, grinding wheels and polishing consumables shall be separately transferred to domestic waste or general industrial solid waste areas. Mixing with recyclable metal scrap is strictly prohibited.

5. Standard Recycling Operation Procedures

5.1 Real-Time On-Site Sorting & Collection

Offcuts, chips and surplus stock generated during each process shall be cleaned immediately upon production and fully cleared daily. Operators must place scrap into corresponding color-coded classified bins by material type. Mixed throwing, random piling and floor accumulation are forbidden. All station scrap shall be cleared before shift handover to maintain 5S compliance.。

5.2 Fixed-Point Zoned Temporary Storage On-Site

An independent dedicated metal scrap storage yard shall be set up in the factory, divided into dedicated zones for carbon steel, stainless steel, aluminum alloy, fine chips, reusable surplus plates and scrapped defective goods. Each zone shall be fitted with clear signage and color-distinguished bins. The temporary storage area shall be rainproof, moisture-proof, rust-proof and contamination-proof with hardened clean flooring to prevent scrap corrosion and pollution.

5.3 Regular Consolidation, Weighing & Registration

The Warehouse Department shall consolidate, classify and weigh scrap in each zone weekly, and record ledgers including material type, generating process, weight, collection date and storage zone to ensure consistent physical inventory and ledger records with full traceability.

5.4 Handover & Disposal with Qualified Recyclers

When scrap accumulates to a certain volume, the Administration & EHS Department shall select formal qualified renewable resource recyclers and sign long-term recycling agreements. Unqualified individual scrap collectors are prohibited. Handover shall be witnessed by two staff for double-checking, weighing and signature confirmation; recycling receipts, weighbridge slips and recycler qualification documents shall be retained.

5.5 Ledger Filing & Traceability

A complete Metal Scrap Recycling & Disposition Ledger shall be established, covering classification, weight, collection date, handover date, recycler name, handler and document serial numbers. Records shall be archived both electronically and physically for a retention period of no less than 3 years to meet ISO system and environmental inspection requirements.

6. Scrap Disposal Requirements

Strictly implement material separation rules: carbon steel, stainless steel and aluminum alloy must be completely isolated with zero mixing to avoid recycling losses and quality hazards.

Reusable surplus plates shall be prioritized for internal production to cut raw material procurement costs and maximize resource efficiency.

Fine metal chips and dust shall be stored in sealed containers and cleared

regularly to prevent dust emissions, caking due to moisture and environmental pollution.

All metal scrap shall be centrally collected and disposed of via compliant unified channels. Employees are forbidden to privately sell, smuggle or discard scrap off-site.

Industrial solid waste, hazardous waste and domestic garbage must not be mixed into recyclable metal scrap to comply with harmless solid waste management standards.

7.Control of Abnormalities & Violations

Any mixing, random piling or random discarding of scrap found on-site shall be rectified immediately, and team violations documented.

Any act of private disposal or smuggling of factory scrap shall be held accountable per company regulations.

Regular scrap classification training shall be organized to raise all staff awareness of classified recycling and environmental compliance.