

	COMPANY STANDARD	ZN-CMCP-Z-2/2024
	UNPROCESSED STEEL SCRAP	Replaces: ZN-CMCP-Z-2/2021

The provisions of this standard specify technical requirements for the classes of unprocessed scrap intended for manual or mechanical processing at CMC Poland sp. z o.o.

This standard **ZN-CMCP-Z-2/2024** was elaborated by the Standardization Committee and replaces the standard **ZN-CMCP-Z-2/2021**

(Valid from 01.06.2024)

Established by the
Standardization
Committee
of CMC Poland sp. Z o.o.

Committee Chairman

.....
Marek Windys

Confirmed:

**The President of
the Board of
CMC Poland sp. z o.o.**

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Wojciech Więclawik

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1. Introduction

1.1. Subject of the standard

The standard specifies technical requirements for individual, defined categories and classes of unprocessed scrap metal intended for manual or mechanical processing.

1.2. Scope of application

This standard shall be used for ordering, purchasing, deliveries and quality acceptance of unprocessed scrap metal used as material for manual and mechanical processing at CMC Poland sp. z o.o.

1.3. Terms and definitions

- 1.3.1. Post-production steel materials generated in the processes of manufacturing metal products, as well as end-of-life steel products, in types and characteristics specified by the Company Standards.
- 1.3.2. Unprocessed steel scrap – scrap that, prior to its use as the charge material in an electric furnace, requires mechanical or manual processing to obtain the required dimensions, form and bulk density, and to remove metallic and non-metallic impurities within the limits allowed by the Company Standard.
- 1.3.3. Unprocessed steel scrap intended for manual or mechanical processing excluding the shredding process – scrap, which due to its dimensions and form, is not suitable for direct shredding process and must undergo thermal cutting or mechanical processing by cutting and crushing.
- 1.3.4. Unprocessed steel scrap for processing in a shredder – unprocessed steel scrap, which prior to its use as the charge material in an electric furnace, requires mechanical processing in a shredder to obtain the required parameters and remove metallic and non-metallic impurities to the limits permitted by the Company Standard.

1.4. Limit parameters

- 1.4.1. Parameters for bulk unprocessed scrap metal: scrap metal with dimensions not exceeding 2000 mm x 2000 mm x 6000 mm; thickness of a single element- up to 300 mm; in the case of scrap metal in the form of steel pipes, structural sections, closed section, etc.: length – 6000 mm, wall thickness – 8 mm, diameter or outline – 400 mm;
- 1.4.2. Parameters for scrap metal in the form of package: density – 0,7 Mg/m³, maximum dimensions – 2000 mm x 1500 mm x 3000 mm, unless the specifications of individual classes allow for different parameters;

2. Classification and designation

2.1. Scrap metal categories

The classification into scrap metal categories is based on the applied scrap processing technologies.

2.2. Scrap metal classes.

Scrap metal classes are defined based on the physical form, required degree of compaction, bulk density and permissible impurities associated with the scrap.

- 2.3. Categories and classes of unprocessed steel scrap are presented in Table 1, divided respectively into scrap intended for shredding and manual or mechanical processing.

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3. Requirements

3.1. All scrap metal classes must be free from hazardous materials.

3.1.1. Hazardous materials shall be understood as any substances or articles that may pose a risk to health, safety, property, or the environment, including hazardous objects mentioned in the Regulation of the Ministry of Entrepreneurship and Technology on occupational health and safety in elimination of hazardous items, including explosives, from scrap metal. Such materials, due to their properties (chemical, physical, or biological) may have the following characteristics or take a form of:

- a) inflammable or explosive materials, ammunition and shells (in whole or in parts or solely ammunition waste);
- b) pressurised, closed or insufficiently open containers of any origin;
- c) radioactive materials in sealed containers, even where no significant external radioactivity is detected due to protective sheath or placement in the delivered scrap metal batch;
- d) materials emitting hazardous radiation, in particular materials, whose radioactivity exceeds the natural background radiation level for CMC Poland sp. z o.o.;
- e) materials containing or emitting substances hazardous to natural environment or steel production technologies;
- f) materials that may have irritant, corrosive, toxic or carcinogenic effects.

3.1.2. Opening of containers shall be considered insufficient if they are not equipped with at least two openings with minimum dimensions of 40 x 40 mm or a diameter of 40 mm. Materials in the form of boilers, compressed air tanks, hydraulic tanks, and central heating furnaces are exempt from the opening requirement provided that they are equipped with clearly unobstructed and verifiable technological openings.

3.2. Additionally, all scrap metal classes must be free from:

- Waste in the form of complete or incomplete waste electric and electronic equipment and components coming from waste equipment (scrap generated after the dismantling of used electric and electronic equipment and transferred for further recycling or recovery to authorized entities shall be allowed);
- All types of hazardous waste as defined under the provisions of Waste Act, such as:
 - ✓ waste in the form of packaging formerly containing hazardous substances bearing hazard markings (pictograms), including barrels, containers, tins indicating possible contact with hazardous materials/substances, as well as packaging without pictograms but indicating potential contact with hazardous materials/substances,
 - ✓ pressurized containers,
 - ✓ oil filters,
 - ✓ batteries, capacitors, accumulators,
- post-production and end-of-life steel packaging waste (excluding class HZ-ENOP);
- food and drinks packaging i.e. cans, open-work containers and other tin-plated materials;
- uniform elements made of steel or cast iron, exclusive of elements approved for mechanical or manual processing as specified in the individual classes of unprocessed scrap;
- entangled elements in the form of rods, wires, including barbed wire, wrapping wire, welding rods, fencing mesh;

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- ropes and cables;

3.3. Contamination

- 3.3.1. Scrap metal of each class must be free from non-metallic materials such as soil, sand, stone, concrete, insulating materials, or iron oxide in any form, except for a limited amount of surface rust resulting from outdoor storage or preparation under normal atmospheric conditions.
- 3.3.2. Scrap metal of each class must be free from flammable non-metallic materials such as sulfur, oil, greases, chemical and organic substances.
- 3.3.3. Scrap metal of each class must be free from non-metallic materials such as rubber, plastics, textiles, wood, and glass except for scrap classes which, prior to its use as furnace batch, require mechanical processing in a shredder in order to obtain required parameters and to remove metallic and non-metallic impurities to the limits permitted by the Company Standard.
- 3.3.4. Scrap metal of each class must be free from waste or by-products generated in steelmaking processes, heating, grinding, sawing, welding, oxy-fuel cutting or combustion processes such as mill scale, slag, grinding dust, and metallic residues resulting from the thermal treatment of waste, and similar materials.

4. Acceptance conditions

- 4.1. Detailed terms and conditions for acceptance of unprocessed steel scrap deliveries are regulated by commercial contracts and orders terms and conditions.
- 4.2. The identification in a delivery of materials referred to in point 3 shall constitute the basis for refusal to accept all or any part of the delivery not meeting the requirements of this Standard, or for re-dispatching the delivery in whole or in part, and for the imposition of contractual penalties and recovery of associated costs.

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TABLE 1_CLASS LIST_SCRAP FOR PROCESSING IN A SHREDDER

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
HZ-EN10	Loose, collected scrap, scrap in the form of sheet metals, openwork items, profile flat bars and other elements of light structures; it may contain passenger car wheel rims and suspension components; It is permitted to accept: Waste generated from the dismantling of end-of-life vehicles in the form of body parts, as well as scrap from the dismantling of waste electrical and electronic equipment, transferred for further recycling or recovery to authorized entities, with non-metallic components removed. It is not permitted to accept: - waste in the form of complete or incomplete waste electrical and electronic equipment or parts which come from waste equipment (scrap generated after dismantling of waste electrical and electronic equipment transferred for further recycling or recovery to authorized entities is permitted); - all types of hazardous waste defined under the provisions of the Waste Act, including among others: ✓ waste in the form of packages after hazardous substances having indications (pictograms), such as barrels, containers, tins or without pictograms but indicating possible contact with hazardous materials/substances, ✓ pressurized containers, ✓ oil filters, ✓ batteries, capacitors, accumulators; - post-production and end-of-life steel packaging waste; - food and drinks packaging i.e. cans, open-work containers and other tin-plated materials; - uniform elements made of steel or cast iron, exclusive of elements approved for mechanical or manual processing as specified in the individual classes of unprocessed scrap; - entangled elements in the form of rods, wires, including barbed wire, wrapping wire, welding rods, fencing mesh; - ropes and cables;	2,0x1,5x6,0	<12	

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
HZ-ENP	Condensed steel scrap corresponding to the class HZ-EN10; It is permitted to accept: waste generated from dismantling of end-of life vehicles in the form of body parts and scrap formed after the dismantling of waste electric and electronic equipment transferred for further recycling or recovery to authorized entities, with non-metallic components removed. It is not permitted to accept: - waste in the form of complete or incomplete waste electrical and electronic equipment and parts coming from waste equipment (scrap generated from dismantling of waste electrical and electronic equipment transferred for further recycling or recovery to authorized entities is permitted); - any type of hazardous waste defined under the provisions of the Waste Act, including, among others: ✓ waste in the form of packages after hazardous substances having indications (pictograms), such as barrels, containers, tins or without pictograms but indicating possible contact with hazardous materials/substances, ✓ pressurized containers, ✓ oil filters, ✓ batteries, capacitors, accumulators; - post-production and end-of-life steel packaging waste; - food and drinks packaging i.e. cans, openwork items and other tin-plated materials; - uniform elements made of steel or cast iron, exclusive of elements permitted for mechanical or manual processing as specified in the individual classes of unprocessed scrap; - entangled elements in the form of rods, wires, including barbed wire, wrapping wire, welding rods, fencing mesh; - ropes and cables.	2,0x2,0x3,0	nd	Maximum package density 0,7Mg/m³. Scrap in the form of packages/bundles may be subject to additional inspections.
HZ-EN0P	Post-production and post-consumer steel scrap in the form of packaging must not be contaminated with hazardous material/substances It is not permitted to accept:	2,0x1,5x6,0	<12	Dimensions of a single package must be bigger than 20 cm x 20 cm x 20 cm or its capacity must be

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
	- waste in the form of complete or incomplete used electrical and electronic equipment or components coming from used equipment (scrap generated from dismantling of waste electrical and electronic equipment transferred for further recycling or recovery by authorized entities is permitted); - any type of hazardous waste defined under the provisions of the Waste Act, including, among others: ✓ waste in the form of packages after hazardous substances having indications (pictograms), such as barrels, containers, tins or without pictograms but indicating possible contact with hazardous materials/substances, ✓ pressurized containers, ✓ oil filters, ✓ batteries, capacitors, accumulators; - food and drinks packaging i.e. cans, openwork items and other tin-plated materials, - uniform elements from cast steel and cast-iron, exclusive of elements approved for mechanical or manual processing as a result of their inclusion in the specifications of particular classes of unprocessed scrap; - Entangled elements in the form of rods, wires, including barbed wire, wrapping wire, welding rods, fencing mesh; - Ropes and cables.			bigger than 15 dm³. Packaging shall be prepared in a way that enables clear and unequivocal verification of their cleanliness.
	Steel scrap - scrap in the form of waste generated from the dismantling of end-of-life vehicles, in whole or their parts, bulk or condensed scrap. Vehicles undergoing dismantling process must be cleared of: • fuel and operating fluids, • refrigerant from the air conditioning system; • oil filter, • battery, • LPG tank, • plastic fuel tanks, • components containing explosives, • exhaust gas catalyst, components containing hazardous substances, including, among others mercury, • glass and headlights,	2,0 x 2,0 x 3,0	n/a	

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
HZ- ENS0	- tyres, - plastic body components such as bumpers, mirrors, protective trims, etc. It is permitted to accept: Engines in whole or in part, suspensions in whole or in part, as well as cast iron and cast steel components originating exclusively from waste generated during the dismantling of end-of-life vehicles, in whole or in part. It is not permitted to accept: - waste in the form of complete or incomplete waste electrical and electronic equipment and parts coming from waste equipment (scrap generated from dismantling of waste electrical and electronic equipment transferred for further recycling or recovery to authorized entities is permitted); - any type of hazardous waste defined under the provisions of the Waste Act, including, among others: ✓ waste in the form of packaging after hazardous substances bearing hazard markings (pictograms), including barrels, containers, tins or without pictograms but indicating possible contact with hazardous materials/substances, ✓ pressurized containers, ✓ oil filters, ✓ batteries, capacitors, accumulators; - post-consumer and post-production steel packaging waste - food and drinks packaging i.e. cans, openwork items and other tin-plated materials, - uniform elements from cast steel and cast-iron exclusive of elements approved for mechanical or manual processing as a result of their inclusion in the specifications of particular classes of unprocessed scrap; - Entangled elements in the form of rods, wires, including barbed wire, wrapping wire, welding rods, fencing mesh; - Ropes and cables			Maximum package density 0,6 Mg/m³ , minimum level of recovery steel scrap and non-ferrous metals in total is 60-65%. Steel scrap came under the evaluation, both visual and on the basis of control shredding. Steel scrap in the form of packages may be a subject to additional inspections.

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
HZ-ENS	Scrap in the form of waste generated from the dismantling of end-of-life vehicles, in whole or their parts, bulk or condensed scrap; must include complete suspension systems, which should be visible and positioned in a manner that allows their presence to be clearly and unequivocally verified. Vehicles undergoing dismantling process must be cleared of: • fuel and operating fluids, • refrigerant from the air conditioning system; • oil filter, • battery, • LPG tank, • plastic fuel tanks, • components containing explosives, • exhaust gas catalyst, components containing hazardous substances, including, among others mercury, • glass and headlights, • tyres, • plastic body components such as bumpers, mirrors, protective trims, etc. It is permitted to accept: - cast steel and cast-iron components originating exclusively from waste generated during the dismantling of end-of-life vehicles, in whole or in part.; - engines in whole or their individual parts. It is not permitted to accept: - waste in the form of complete or incomplete waste electrical and electronic equipment and parts coming from waste equipment (scrap generated from dismantling of waste electrical and electronic equipment transferred for further recycling or recovery to authorized entities is permitted); - any type of hazardous waste defined under the provisions of the Waste Act, including, among others: ✓ waste in the form of packaging after hazardous substances bearing hazard markings (pictograms), including barrels, containers, tins or without pictograms but indicating possible contact with hazardous materials/substances, ✓ pressurized containers, ✓ oil filters, ✓ batteries, capacitors, accumulators;	2,0x2,0x3,0	nd	Maximum package density 0,6 Mg/m³, minimum level of recovery of steel scrap and non-ferrous metals in total is 71%. Steel scrap came under the evaluation, both visual and on the basis of control shredding. Steel scrap in the form of packages may be a subject to additional inspections.

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
	- post-consumer and post-production steel packaging waste; - food and drinks packaging i.e. cans, openwork items and other tin-plated materials; - uniform elements from cast steel and cast-iron, exclusive of elements approved for mechanical or manual processing as a result of their inclusion in the specifications of particular classes of unprocessed scrap; - Entangled elements in the form of rods, wires, including barbed wire, wrapping wire, welding rods, fencing mesh; - Ropes and cables.			
HZ-ENS+	Steel scrap of HZ-ENS class must contain complete engines along with their ancillary equipment, as integral part of waste generated from the dismantling of end-of-life vehicles. In cases where the scrap has been condensed prior to delivery by flattening, cutting, baling or bundling, key components determining the material grade such as suspension systems and complete drivetrain units (engines and gearboxes) must be visible and positioned in a manner that allows their presence to be clearly and unequivocally verified. For HZ-ENS+ grade scrap containing engines, graphical marking of the material is required in accordance with the provisions set out in the Scrap Supply Order. Vehicles undergoing dismantling process must be cleared of: • fuel and operating fluids, • refrigerant from the air conditioning system; • oil filter, • battery, • LPG tank, • plastic fuel tanks, • components containing explosives, • exhaust gas catalyst, components containing hazardous substances, including, among others mercury, • glass and headlights, • tyres, • plastic body components such as bumpers, mirrors, protective trims, etc. It is permitted to accept: cast steel and cast-iron components originating exclusively from waste generated during the dismantling of end-of-life vehicles, in whole or in part. It is not permitted to accept:	2,0x2,0x3,0	nd	Maximum density 0,8 Mg/m³, the minimum recovery yield of steel scrap and non-ferrous metals combined during test processing shall be at least 76%. The scrap shall be classified on the basis of visual inspection as well as on the basis of test shredding Scrap in the form of packages may be subject to additional inspections

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
	- waste in the form of complete or incomplete waste electrical and electronic equipment and parts coming from waste equipment (scrap generated from dismantling of waste electrical and electronic equipment transferred for further recycling or recovery to authorized entities is permitted) - any type of hazardous waste defined under the provisions of the Waste Act, including, among others: ✓ waste in the form of packaging after hazardous substances bearing hazard markings (pictograms), including barrels, containers, tins or without pictograms but indicating possible contact with hazardous materials/substances, ✓ pressurized containers, ✓ oil filters, ✓ batteries, capacitors, accumulators; - post-consumer and post-production steel packaging waste; - food and drinks packaging i.e. cans, openwork items and other tin-plated materials; - uniform elements from cast steel and cast-iron exclusive of elements approved for mechanical or manual processing as a result of their inclusion in the specifications of particular classes of unprocessed scrap; - entangled elements in the form of rods, wires, including barbed wire, wrapping wire, welding rods, fencing mesh; - ropes and cables.			
HZ-EHRB	Condensed scrap in the form of sheet metals, openwork items, flat bars, profiles and other light construction elements. It is permitted to accept: scrap in the form of waste generated from the dismantling of end-of-life vehicles and scrap generated from the dismantling of used electrical and electronic equipment cleared of non-metallic components transferred for further recycling or recovery to authorized entities; It is not permitted to accept: - waste in the form of complete or incomplete waste electrical and electronic equipment or components coming from waste equipment (scrap generated from dismantling of waste electrical	1,5 x 0,5 x 0,5	<3	

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
	and electronic equipment transferred for further recycling or recovery to authorized entities is permitted); - any type of hazardous waste defined under the provisions of the Waste Act, including, among others: ✓ waste in the form of packaging after hazardous substances bearing hazard markings (pictograms), including barrels, containers, tins or without pictograms but indicating possible contact with hazardous materials/substances, ✓ pressurized containers, ✓ oil filters, ✓ batteries, capacitors, accumulators; - post-consumer and post-production steel packaging waste; - food and drinks packaging i.e. cans, openwork items and other tin-plated materials; - uniform elements from cast steel and cast iron exclusive of elements approved for mechanical or manual processing as a result of their inclusion in the specifications of particular classes of unprocessed scrap; - Condensed scrap in the form of packages.			
HZ-E1	Condensed scrap in the form of sheet metals, openwork items, flat bars, profiles and other light construction components; It is not permitted to accept: - waste in the form of complete or incomplete waste electrical and electronic equipment and parts coming from waste equipment; - any type of hazardous waste defined under the provisions of the Waste Act, including, among others: ✓ waste in the form of packaging after hazardous substances bearing hazard markings (pictograms), including barrels, containers, tins or without pictograms but indicating possible contact with hazardous materials/substances, ✓ pressurized containers, ✓ oil filters, ✓ batteries, capacitors, accumulators; - post-consumer and post-production steel packaging waste;	1,5 x 0,5x 0,5	<3	

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments / Remarks
	- uniform elements from cast steel and cast-iron, exclusive of elements approved for mechanical or manual processing as a result of their inclusion in the specifications of particular classes of unprocessed scrap; - elements in the form of rods, wires, including barbed wire, wrapping wire, welding rods, fencing mesh, ropes and cables; - scrap in the form of waste coming from the dismantling of end-of-life vehicles in whole or in parts; - scrap generated from dismantling of waste electric and electronic equipment transferred for further recycling or recovery to authorized entities - Condensed scrap in the form of packages			
HZ-E0	Reclassified steel scrap metal.	n/a	n/a	

COMPANY STANDARD_UNPROCESSED SCRAP TABLE1_CLASS LIST_SCRAP FOR MECHANICAL AND MANUAL PROCESSING.

Scrap Class	Characteristics	Dimensions Max. [m]	Thickness [mm]	Comments/ Remarks
HZ-51	Structural, bulky, oversized steel scrap; steel scrap in the form of rails (including incomplete rails with the head or foot removed), railway and tram turnouts, wheelsets;	2,0 x 2,0 x 6,0	≥8	

HZ-52	Light structural, bulky and oversized steel scrap; scrap in the form of sheet metals, openwork items, flat bars, sections and other light structure components. It is not permitted to accept: Scrap in the form of waste generated from the dismantling of end-of-life vehicles, in whole or in part, as well as scrap coming from the dismantling of used electrical and electronic equipment transferred for further recycling or recovery to authorized entities; It is permitted to accept: Car rims and suspension components.	2,0 x 2,0 x 6,0	≥ 3	
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