

# Recycled Content Steel Wire Products

BS-00001 - Version 1

## Preface

Bekaert's ambition is to be the leading partner for shaping the way we live and move, and to always do this in a way that is **safe, smart, and sustainable**. Our values of integrity, trust, agility, and boldness unite our team worldwide. We will continue to strengthen our core in steel wire applications, and we will pioneer with creativity beyond steel into new materials, new markets, services, and solutions.

Aware of the impact of the quality of incoming products and outsourced services, Bekaert invests in developing strong relationships with its partners. We are convinced that we are truly better together. All stakeholders have an interest in our organization based on the outcomes of our actions. We believe this interdependency is mutually beneficial for long-term, positive progress.

There is a strong demand from Bekaert's customers to increase recycled content in our products in the context of a circular economy. To avoid greenwashing and to establish a credible chain of custody model, we defined a set of clear rules for calculation and reporting of recycled content, to be externally audited and certified by an independent certification body. This certification scheme includes Bekaert itself next to the concerned wire rod and related wire product suppliers.

Bekaert encourages other steel making and steel processing companies, and customers of steel wire products to refer to this standard as basis for recycled content claims.

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## 1 Purpose

This document is intended to give detailed information about Bekaert's chain of custody model related to recycled content of steel wire products. It is intended to support the recycled content claims made by the various actors in this particular chain of custody and should match the expectations of the customers of Bekaert.

Recycled content refers to the relative amount of steel that has traceability to recycled pre- and post-consumer steel, as defined in ISO 14021:2016 "Environmental labels and declarations", paragraph 7.8.1.1 a).

This document is to be considered as a normative standard, which can be audited and certified by an independent and accredited certification body.

## 2 Motivation for change

New Document.

## 3 Scope

The requirements apply to all types of steel wire products, like wire rod, round, flat or shaped wire products, ropes, cables, strands, bead wire, steel cords, or steel fibres, in further text collectively referred to as: "**product**".

## 4 Normative references

ISO 14021:2016      Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling)

ISO 22095:2020      Chain of custody – General terminology and models

## 5 Used terminology

### 5.1 Actors

Actors in the supply chain include a manufacturer, trader, distributor, carrier, or retailer.

### 5.2 Certificate of Analysis (COA)

A document that actors produce that verifies the product they manufactured, treated, or handled conforms to their customer's requirements.

### 5.3 Recycled content of wire rod

A sequence of processes is used to produce wire rod:

- steelmaking: starts from solid materials and gases, and ends where liquid steel is poured into the tundish,
- continuous casting: starts at liquid steel entering the tundish and delivers blooms or billets,
- rolling: starts with re-heating blooms or billets and delivers wire rod.

Scrap that is generated at the level of crude steel and beyond (i.e. scrapping of bloom and billets after continuous casting and all downstream processes at the rolling mill) and that is transported to scrap yards for remelting is pre-consumer recycled material. Other pre- and post-consumer recycled materials are collected on steel mill scrap yards too. See also Appendix A.

From this we calculate the percentage of recycled content as follows:

$\%RC = 100\% \times (\text{pre-consumer scrap} + \text{post-consumer scrap}) \div (\text{all scrap} + \text{other iron sources})$  for the materials charged to the electric arc furnace (EAF) or the convertor.

#### **5.4 Physical segregation**

In the segregated model, materials or products with certain specified characteristics are kept physically separated and their characteristics are maintained throughout the supply chain. The inputs will have identical characteristics but may have different sources. The identity of any particular source might be lost.

#### **5.5 Controlled blending**

The controlled blending model is a chain of custody model in which materials or products with a set of specified characteristics are mixed according to certain criteria with materials or products without that set of characteristics. This results in a known proportion of the specified characteristics within all parts of the final output. The ratio between inputs is known for all outputs at all times for a contained volume (e.g. batch, shipment, storage facility). The output percentages can therefore be ensured in all cases.

#### **5.6 Mass balance**

The mass balance model is a chain of custody model in which materials or products with specified characteristics are mixed with materials or products without some or all of these characteristics, resulting in a claim on a part of the output, proportional to the input.

### **6 Summary of responsibilities**

All actors must comply with the requirements and calculating methods within this document.

The claimant shall be responsible for evaluation and provision of data necessary for the verification of self-declared environmental claims. A self-declared recycled content claim shall only be considered verifiable if such verification can be made without access to confidential business information. Claims shall not be made if they can only be verified by confidential business information.

## 7 Requirements

### 7.1 Certification requirement

The minimum acceptable level of development is a QMS certified to ISO 9001 by an accredited third-party certification body. The scope of the certificate shall cover and mention the concerned production and/or design activities and cover those processes that contribute to proofs of origin such as purchasing, controlling or logistics.

### 7.2 Documented information

The actor active in the chain of custody shall maintain complete and up-to-date documented information relevant to demonstrating the organization's conformity with all applicable chain of custody requirements.

Retention time for all documented information, including purchase and sales documents, training records, and production records, shall respect the retention time of the relevant chain of custody, and shall be specified considering among other factors, long term effects and the lifetime of the material or product. The organization should be able to always confirm the status of materials or products held in stock.

### 7.3 Traceability

It shall be possible to trace materials and/or semi-finished products sequentially throughout the manufacturing process of an actor and in a way that is verifiable through the documented information. The manufacturing process flow shall be documented, indicating inputs, intermediary products, internal loops, and outputs, with special attention to flow of recycled materials.

Wire rod suppliers shall apply the method of controlled blending and record evidence of material additions for every heat. Preferably, the wire rod supplier records additions of pre-consumer and post-consumer scrap separately.

All actors shall periodically verify the effectiveness of their traceability systems and appropriate corrective actions shall be organised promptly if shortcomings are detected.

### 7.4 Segregation

The actor shall maintain a documented procedure for segregating and clearly identifying recycled materials and products containing recycled materials in stages such as receiving, storage, transfer to shipping, and shipping.

## 8 Requirements Chain of custody

### 8.1 Organization

A document describing the actual identification of actors, locations (including sites), inputs, outputs, and associated information in the chain of custody shall be maintained.

All actors shall have an oversight of their chain of custody and manage it so that there is an unbroken chain that complies with the requirements.

The applied chain of custody method and the level of detail for reporting the recycled content shall be agreed upon with the customer.

## 8.2 Control and verification

Control procedures shall be put in place to avoid materials or products that do not conform to the minimum requirements from entering the chain of custody.

Within the chain of custody, the quantities received and supplied to customers shall be reconciled within a defined accounting period in order to verify that the outputs relate appropriately to the inputs (Inventory balancing). Actors active in the chain of custody shall document the total quantity (volume or mass or units) of recycled materials or products received and products with recycled content supplied to customers within the appropriate specified timeframe.

All actors shall be audited against the requirements of this document and certified by an independent certification body.

## 8.3 Recycled content claims

The actor shall provide the customer with a written statement of facts voluntarily administered by a person authorized to do so. This document will state a guaranteed minimum, or an actual value related to specific heats, to a production period, etc.

Steel making companies shall report on controlled blending. Steel processing companies shall apply physical segregation when individual wire products are processed, and controlled blending whenever multiple wires are combined in a product.

Based on the above, we differentiate for steel making companies following recycled content claims for (individual) units:

- Preferably reporting the calculated recycled content on the COA of the steel mill for every heat,
  - Optionally also reporting the distribution of this recycled content between pre-consumer and post-consumer scrap,
- Alternatively reporting the minimum guaranteed recycled content on the COA of the steel mill for every heat,
- Or, least preferred, reporting the minimum guaranteed recycled content on a periodic statement (validity maximum 12 months).

For steel processing companies, we differentiate following recycled content claims for (individual) units:

- Fixed minimum recycled content  
Based on physical segregation of applicable products in the process.
- Minimum recycled content – controlled blending  
The reported value is the calculated minimum of recycled content along the length of the unit.

Reported values for deliveries or batches will be calculated as follows:

- Fixed minimum recycled content  
Based on physical segregation of applicable material in the process.
- Actual minimum recycled content – controlled blending  
The reported value equals the minimum individual value.
- Average recycled content – mass balance  
The reported value equals weighted average of individual values.

If the specific units have been subject to third-party assessment of traceability, the report will refer to the associated certificate/declaration.

Spot calculation will be used to report on the recycled content as a property at a specific spot (cross section) along the final product. See Appendix B.

## 9 External audits and certification

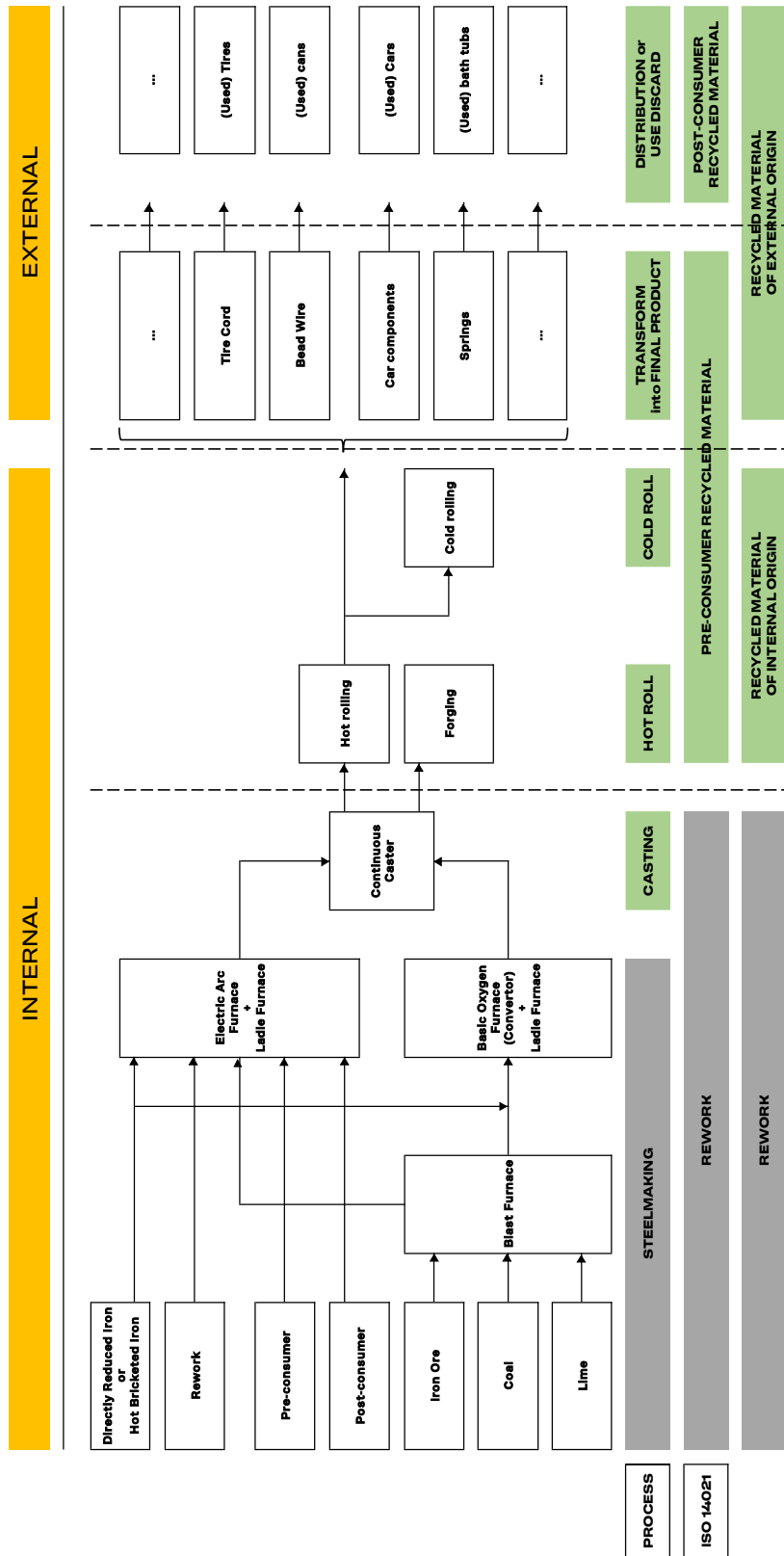
Verification of compliance to the requirements (§ 6 to 8 of this document) will be done by means of an onsite audit. The actor shall submit all necessary forms, records, documents, and data to the qualified system auditor of the external certification body for review.

Any nonconformity to the mentioned requirements will be clearly identified by the auditor in the audit report. All nonconformities must be resolved before granting of certification is possible.

Actors will be certified for a period of 1 year. At the recertification the objective evidence of recycled content claims of the former 12 months will be examined.



## Appendix A: Traceability Wire rod suppliers



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## Appendix B: Spot calculation of recycled content of final product

### Wire products containing a single wire

The recycled content of final product is directly linked to the recycled content of the wire rod to which it has traceability:

- If the actual recycled content of the wire rod is known, the recycled content of the final product is the actual recycled content of the wire rod.
- If the actual recycled content of the wire rod is not known, but the minimum recycled content of the wire rod is guaranteed, the recycled content of the final product is the minimum recycled content of the wire rod.
- If there is no actual or guaranteed minimum recycled content of the wire rod, the recycled content of the final product is assumed zero.

### Other products

The calculation of recycled content of other (multi-filament) final products relies on following properties and/or characteristics for every filament  $f$ :

- recycled content of the wire rod to which it has traceability:  $RC_f$
- diameter:  $d_f$

The generic formula of recycled content of final product is as follows:

$$RC = \frac{\sum_{all\ f} d_f^2 RC_f}{\sum_{all\ f} d_f^2}$$

The generic formula gets simpler in following cases:

- if all filaments have the same diameter, the recycled content of final product is the average of all  $RC_f$
- if all filaments trace back to the same value of recycled content of wire rod, the recycled content of final product is the same as the recycled content of the wire rod.

Remarks:

- if all filaments have a recycled content  $RC_f$  that refers to actual values, then the calculated recycled content of final product also is an actual value,
- if the property 'recycled content' of at least one filament refers to a specified minimum, then the calculated recycled content of final product also is a minimum of the actual value,
- any filament that does not have traceability to wire rod with a known recycled content, is assumed to have no recycled content.