Why are the waste disposal companies not yet involved in the EPD?

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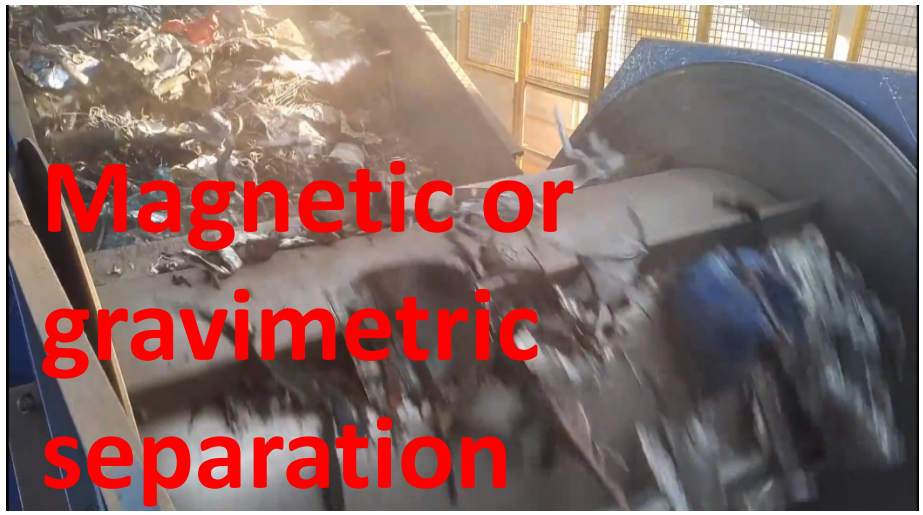
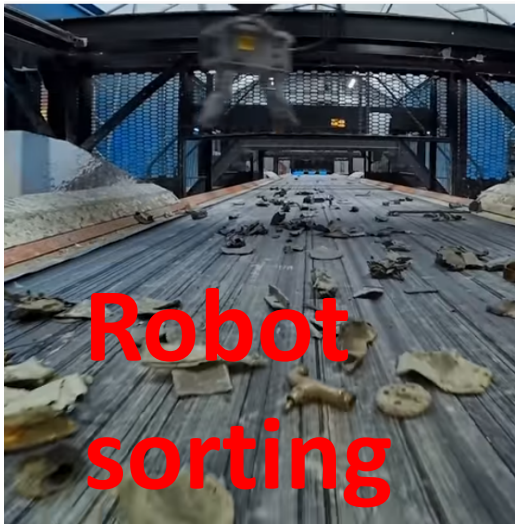
Convener TC135/WG17
c-PCR for Metals under EN 15804

Questions

What do we want to achieve by involving waste disposal companies?

- Abate environmental burdens?
- Improve resource conservation?
- In this life cycle or next?





End of Waste

REGULATIONS

COUNCIL REGULATION (EU) No 333/2011

of 31 March 2011

establishing criteria determining when certain types of scrap metal cease to be waste under Directive 2008/98/EC of the European Parliament and of the Council

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2008/98/EC of the European

shown that the proposed criteria on the waste used as input in the recovery operation, on the treatment processes and techniques, as well as on the scrap metal resulting from the recovery operation, fulfil those objectives since they should result in the production of iron, steel and aluminium scrap devoid of hazardous properties and sufficiently free of non-metallic compounds.

Graded according to a customer spec

ANNEX

Criteria for iron an

Criteria	
1. **Quality of scrap resulting from the recovery operation**	
1.1. The scrap shall be graded according to a customer specification, an industry specification or a standard for direct use in the production of metal substances or objects by steel works or foundries.	Qu
1.2. The total amount of foreign materials (steriles) shall be ≤ 2 % by weight. Foreign materials are: (1) non-ferrous metals (excluding alloying elements in any ferrous metal substrate) and non-metallic materials such as earth, dust, insulation and glass; (2) combustible non-metallic materials such as rubber, plastic, fabric, wood and other chemical or organic substances;	Qu At an an Th fol

All treatments ready

3. **Treatment processes and techniques**

3.1. The iron or steel scrap shall have been segregated at source or while collecting and shall have been kept separate or the input waste shall have been treated to separate the iron and steel scrap from the non-metal and non-ferrous components.

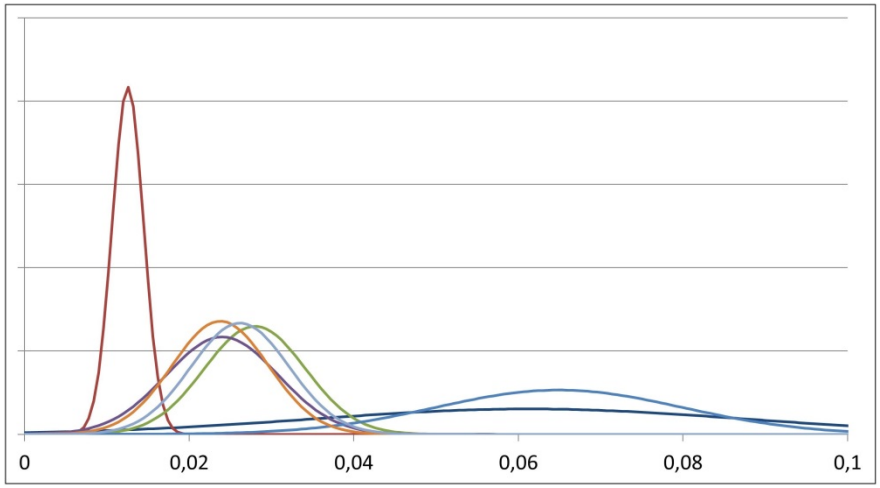
3.2. All mechanical treatments (like cutting, shearing, shredding or granulating; sorting, separating, cleaning, de-polluting, emptying) needed to prepare the scrap metal for direct input into final use in steel works and foundries shall have been completed.

3.3. For waste containing hazardous components, the following specific requirements shall apply:

(a) input materials that originate from waste electrical or electronic equipment or from end-of-life vehicles shall have undergone all treatments required by Article 6 of Directive 2002/96/EC of the European Parliament and of the Council ([4]) and by Article 6 of Directive 2000/53/EC of the European Parliament and of the Council ([5]);

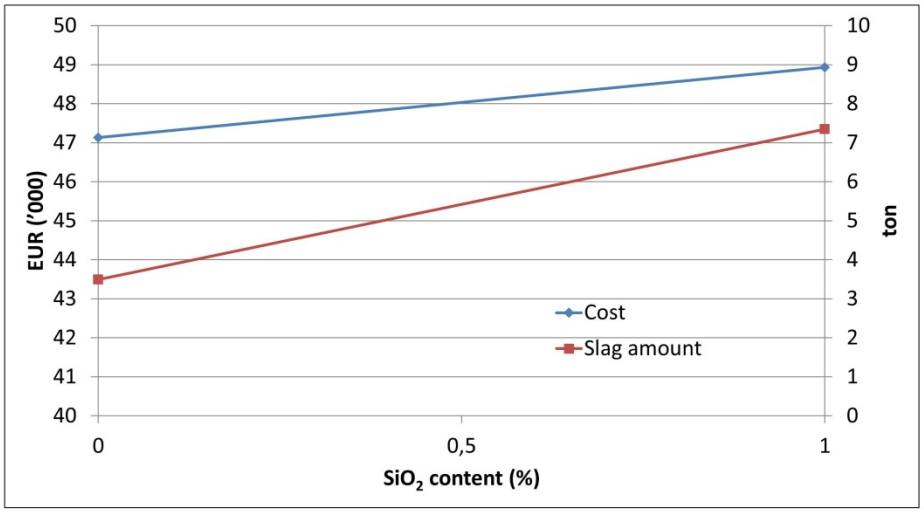
(b) chlorofluorocarbons in discarded equipment shall have been captured in a process approved by the competent authorities;

The result



Cu content in 7 different product groups
Distribution due to variation in scrap and charging

Dirt consumes energy and slag formers and need extra melting time



Problematic facts

- Scrap quality not measured at delivery
- Better scrap quality taken for granted
- EoW and scrap classification forgiving
- No quality levels on scrap upgrade processing
- Little or no joint research among processors
- Normal practice today creates losses of alloys like Ni, Cr, Mn and Cu as well as overconsuming energy, slag formers and emitting more GHG than necessary

What shall we do?

- Develop quality levels on scrap upgrade processing
- Link scrap upgrade quality to benefit in module D
- Develop rules on what quality level should be applied to different designs
- Work with machine suppliers and early adopters among scrap processors
- Improve the End of Waste definition?

Pictures

- Sicon GmbH
- ZenRobotics
- EU regulations
- Gyllenram R et al, The impact of scrap upgrading on EAF production cost and environmental performance, Metec 2015