Doing more with less – the case of steel industry co-products

Åsa Ekdahl, worldsteel
UNEA-4, March 11, 2019
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Steel production at a glance

- Global steel production reached 1,800 Mt in 2018
- Steel can be produced from iron ore or scrap
- Scrap use is limited due to the long service life of steel products and the continued increase in steel demand
The steel industry uses its resources efficiently and produces very little waste. In 2017, 96.3% of steel industry raw materials were converted: 63.6% were converted into steel products, 32.7% into co-products, as little as 3.7% became waste.

Nearly 100% of the steel industry’s co-products can be used.

**Slag**
is used in cement, road construction, fertilisers, hydraulic engineering and sea forestation.

**Process gases**
are used to produce heat and/or electricity.

**Emulsions and oils**
are used as reducing agents.

**Iron oxides and zinc**
are recovered from dust and sludges.

**Chemicals**
are used as input material for the chemical industry.
Circular economy, resource efficiency and zero waste

- The use of steel industry co-products:
  - Increases resource efficiency - reduces the need for raw materials
  - Reduces CO2 emissions – the use of blast furnace slag as a replacement for clinker in cement production saves energy and CO2
  - Prevents landfill waste
  - Generates revenue

- However, perception and lack of a holistic approach can hamper the full use of these co-products
The full use of co-products is a top priority

- **Production processes** that produce useful materials with consistent properties
- **Standardisation** of properties and applications
- **Research** into properties and new applications
- Working with stakeholders and policymakers to change the **perception** of co-products
- **Branding**
Recommendations to policymakers

- Clearly **differentiate** co-products from waste in legislation to improve their perception and encourage their use.
- Give **precedence** to the use of co-products and avoid stricter requirements for their use.
- Apply a **holistic approach** to the use of co-products considering all environmental, energy and resource aspects.
- **Promote** the development of new applications.
Thank you for your attention.

For further information contact:

Åsa Ekdahl | Head of Environment and Climate Change
World Steel Association
ekdahl@worldsteel.org | T: +32 (0)2 702 89 04 | worldsteel.org
worldsteel.org