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CEMIVET

Circular Economy in Metal Industries Vocational Education and Training

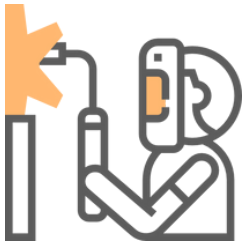
Why material responsibility is so important in metal industry?

Metal industry is the key sector for many others

It supplies multiple solutions for many different products

Strategic place in the EU economy

The steel industry has long held a **strategic place** in the EU economy, fostering innovation, growth, and employment.



Welding industry is very linked with raw material consumption

Thanks to their **unique properties,** metals can be **indefinitely recycled**. At their end-of-life (EoL) stage, products made of metals can be **re-processed via mechanical treatment** and **re-introduced** to the production process to make new metals.

Optimization of the use of recycled materials

Using steel scrap in the production process **reduces CO2 emissions by 58% Annual savings** on environmental costs by using steel scrap in the EU can achieve up to **€20 billion** (2018).

Sustainable energy economy

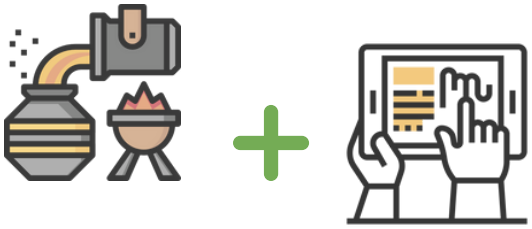
Recycling steel **saves 72% of the energy needed for primary production** (i.e., 4,697 kWh per tonne)

Metal ore resources crisis solutions

Recycling one tonne of steel **saves 1.4 tonnes of iron ore, 0.8 tonnes of coal, 0.3 tonnes of limestone and additives, and 1.67 tonnes of CO2 .**

Traditional industry

EU is the **second largest producer** of steel in the world. Its production corresponds to 11% of the world.



Digitalization delivers opportunities for automation, work simplification, **circular designed production and business models**

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The project CEMIVET aims to demonstrate the possibilities of the Circular Economy in the metal industry, in order to achieve the sustainable goals set by the EU

What does Circular Economy offer to enterprises in metal industry?

- **Optimizing production processes and raw material (RM) using** by outsourcing for specialized manufacturers
- **Controling and reducing the consumption of RM** and increasing the usage of secondary materials. Developing **new business models** supported by the second life of RM.
- **Optimalization** of the storage rotation of the RM.
- **Filling in EU regulation for current and upcoming regulations on national and regional level** mandatory for enterprises in green deal politics implementation
- **Source maintenance**
- **Employer Branding:** better view of **jobs in metal industry -** more sustainable, that contributes **to respect enviroment; Improved image of the welding occupation** amongst youth

What does CEMIVET offer to enterprises?

- Desmostration of **CE possibilities** regarding **metal working and manufacturing**
- **A better understand** ongoing transformations and the way to **Circular Economy (CE)**
- Addressing **the added value of Circular Economy**
- **Undertaking appropriate adaptation measures**
- **Giving a good image of "Green-Friendly" organization for the enterprises**

Why do we need changes?

The EU is promoting the **transformation of the economic** system into a **CE**

Manufacturing and processing industries are **running out of raw materials**

There is a **shortage crisis**

Increase in raw materials and energetic **costs**

What is in our hands?

Maximizing and Striving to increase the % of recovery of other types of steel (E.g the good rate: the stainless steel recycling rate is 90% now!)

Recycle metals to close the loop within the production process, **reducing the amount of waste** that goes into landfill and primary raw materials required

Results of the growing metal demand on a **linear economy** are:

• Declining ore grades.
• Resource scarcity and price hikes.
• Environmental impacts (air and water pollution, land degradation, biodiversity loss).

Source: EuRIC AISBL – Recycling: Bridging Circular Economy & Climate Policy
This factsheet has been designed using resources from Flaticon.com

Consortium

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