

# END-OF-WASTE CERTIFICATE: RECYCLING FROM WASTE TO PURE RAW MATERIAL

**EMR Rotterdam:**  
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**Port of Rotterdam:**  
portofrotterdam.com/circular\_port



## DESCRIPTION

EMR Netherlands is the only metal recycling company in the Netherlands with an End-of-Waste (EoW) certificate. The certificate allows EMR Netherlands to offer recycled material such as iron, steel and aluminum as a pure raw material to manufacturers. This recycled material can be used for the production process of new metals. In addition, using recycled materials instead of virgin materials, not only saves energy but also reduces greenhouse gas emissions, including CO<sub>2</sub>. Recycling metals also reduces other adverse environmental issues associated with extracting new raw materials from the earth. The certificate offers buyers and sellers of recycled materials the assurance that EMR Netherlands processes and offers the metals sustainably and responsibly. By working in this way, EMR Netherlands is committed to a sustainable and circular economy with the goal of zero emissions.

## TIMEFRAME

Target:



## PURCHASE AND DELIVERY OF MATERIAL

- Clean material
- Non-metal material (such as plastic, wood, glass, asphalt, etc)
- Different materials in objects to be scrapped (in bridge sections, cranes or containers, etc)

## ON-SITE PROCESSING

- Quality inspection (determination of contamination rate)
- Administrative stock management
- Adding high-quality material if necessary
- Sorting/processing

## TRADING RAW MATERIALS

- Finding the right buyer for clean raw materials
- Certificate of materials

## WHY

More than ever, it is essential to deliver better environmental performance while helping people and companies become more sustainable. EMR's mission is to be a global leader in sustainable materials.

## EXPECTED RESULTS

The products are already at least 98 per cent pure through careful sorting of all materials and removal of even the smallest metal particles from delivered batches. In addition, the aim is to extract the highest possible volume of new raw materials from every tonne of metal waste.

## LESSONS LEARNED

- The scrap metal delivered still contains non-metal materials, so everything must be treated and sorted.
- Proper and critical inspection of all scrap deliveries is necessary to maintain End-of-Waste certification.
- Having good and qualified staff and equipment on site for inspection and processing of materials.
- Continuous innovation in the metal recycling industry for providing viable new solutions and applications.

**INPUT**  
Metal Waste  
Streams



**OUTPUT**  
New Resources



## TECHNOLOGY READINESS LEVEL



1	2	3	4	5	6	7	8	9
Basic principles observed	Technology concept formulated	Experimental proof of concept	Technology validated in lab	Technology validated in relevant environment	Technology demonstrated in relevant environment	System prototype demonstration in operational environment	System complete and qualified	Actual system proven in operational environment
DISCOVERY			DEVELOPMENT			DEMONSTRATION		

## CIRCULAR INDICATORS (REDUCTION OF)



CO<sub>2</sub>



Energy



Costs



Raw materials

**COOPERATING PARTIES**

