



Inorganic binder system to minimize emissions, improve indoor air quality, purify and reuse of contaminated foundry sand

# Green Foundry

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**The main objective of the Green Foundry project is to decrease the environmental impacts and increase competitiveness of the European foundry industry by introducing new inorganic binders in sand moulding systems in ferrous foundries.**

## OBJECTIVES

By introducing new inorganic binder system in ferrous foundries the project aims to

- Decrease hazardous air emissions from the casting process.
- Improve the indoor air quality for a safer work environment.
- Demonstrate purification methods for contaminated foundry sand to increase recycling and reuse.
- Provide BAT publication describing the implementation of inorganic binder systems.

## ACTIONS

- Measuring total emissions and indoor air quality in pilot foundries representing both organic and inorganic binder systems.
- Demonstrating production scale test casts made by inorganic binder moulds in ferrous pilot foundries.
- Demonstrating composting, washing, thermal reclamation methods for recycling and reusing foundry sand and demonstrating the use of recycled sand in core-making.

## EXPECTED RESULTS

- Hazardous air emissions from the casting processes are expected to decrease by 80 %.
- Indoor air quality is expected to improve and health risks are expected to decrease by 70 %.
- Increase the recycling of foundry sand and consequently to reduce the amount of waste sand.
- Increase the reuse of waste sand.

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