CRM Group
Centre for Research in Metallurgy – CRM Group
Liège, Belgium

ABOUT

CRM Group is a non-for-profit research organisation providing its customers with innovative technological solutions for the processing and manufacturing of metallic materials, from primary and secondary raw materials up to finished products, with a truly holistic process-product approach.

CRM Group is mainly working with industrial partners, with a strong network of more than forty-five members (among which numerous global players) covering the whole value chain of steel, other base metals and associated materials, recycling included.

EXPERTISE

CRM Group has a long experience in scaling-up new production processes and new metallic products from the laboratory scale on which they have initially been developed up to the very large production sizes that are common in the metallurgical sector.

To do so, CRM Group operates unique pilot facilities addressing all the metal production stages, mostly conceived, designed and constructed by its own engineering department. Apart from its numerous R&I projects with industrial partners, CRM Group is also actively involved in regional and European networks dealing with Resource Efficiency : CRM Group coordinates the 'Pyrometallurgy' axis of the Walloon mega-project 'Reverse Metallurgy', aiming to develop unique technologies for the recycling and valorisation of waste metals in the spirit of Circular Economy and Sustainable Development, and to create value for regional economy and companies; at European level, CRM Group is member a.o. of the European Steel Technology Platform (ESTEP), the European A.SPIRE association and EIT Raw Materials.

FACILITIES & SERVICES

As a member of the Metnet network of pilot plants within Prometia, CRM Group may offer access to its wide lab and pilot infrastructure in the following fields :
- primary and secondary raw materials pre-processing : drying, intensive mixing, shredding, grinding, crushing, agglomeration (roll press briquetting, compaction, extrusion)
- thermo-chemical treatment of solids (calcination, direct reduction, pyrolysis, gasification under low or high pressure,…) in pilot facilities like : grate sintering, rotary kiln, multiple and rotary hearth furnaces, fluidized beds, heating furnace under vacuum, versatile fixed bed shaft furnace
- remelting or smelting in : a rotary tilting furnace (for Al or Zn), induction melting furnaces (atmospheric or vacuum - for steel and ferro-alloys), and coming soon, a quite unique and versatile 125 litre plasma furnace (for CRM's recovery by smelting or fuming, and for liquid slag processing and granulation)
- metal solidification and processing (casting, cold and hot rolling, thermo-mechanical treatments)
- all kinds of advanced coating and (re-)manufacturing techniques
- special sensing techniques useful in primary & secondary raw materials sorting or processing (a.o. LIBS technology, including on liquid metal or slag)
- special characterisation techniques, like : high temperature rheometer allowing to measure the viscosity and other properties of metal and slag up to 1650°C, numerous in-use properties of metals (e.g. resistance to wear or corrosion, including at high temperature)

MORE INFORMATION

Website: www.crmgroup.be
Contact: Bernard Vanderheyden
Bernard.VANDERHEYDEN@crmgroup.be