

MODICAST

Wear Resistant Cast Iron Products

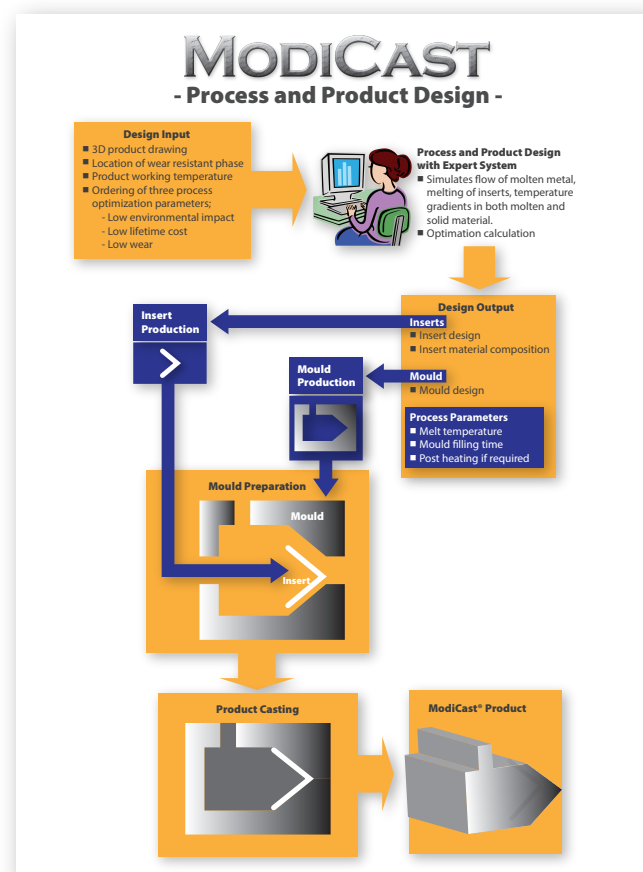
Production of two phase low cost functional gradient recyclable wear resistant cast iron products

Aggregates dominate the material consumption in Europe, except for water. The consumption in EU is 3.6 billion tons/year, increasing 2% per year, while fossil fuel consumption is 2.0 billion tons. The fastest growing material stream is waste. Together waste and aggregates dominate all solid material processing in Europe. These industries use wear resistant iron based materials in processing tools with normally high heavy metal content (12-45%).

Crushing rocks and tearing apart solid waste causes high abrasion in the tools which then releases heavy metals into the surrounding while used. It is expected that heavy metal pollution absorbed in low concentration passes up the food chain with increased concentration and toxicity in animals and human beings.

The ModiCast® process can provide a more efficient and environmentally friendly method to produce a wear resistant cast iron with functional gradient material which is hard only in strategic locations and softer and more machinable elsewhere. With the ModiCast® process and product design we can decrease heavy metal content of tools over 99% compared to hard steel tools but increase life time by up to 300% in certain cases.

For more information please visit
www.modicast.com



ModiCast® is registered trademark of the new casting technology



UK Health and Environment Research Institute
 Part of the Pera Innovation Network



The research leading to these results has received funding from the European Union's Seventh Framework Programme managed by REA-Research Executive Agency <http://ec.europa.eu/research/rea> ([FP7/2007-2013] [FP7/2007-2011]) under grant agreement n° 262503 (OptiCast)