

Lightme

Pilot Lines



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Green Sand Casting Pilot Line (GSC)



The green sand casting (GSC) pilot line is used for Aluminum and Magnesium alloys.



The sand mould for GSC is a mixture of standard bentonite-bonded sand with lustrous carbon former and water or organic binders.

Thanks to the possibility to produce sand moulds not only by hand but also mechanically, a wide variety of moulds can be produced quickly and cost-effectively. Therefore, the GSC process is often used in prototype production and for large and heavy components. With appropriate automation, GSC is used for small and medium series.





The GSC pilot line at ÖGI consist of an Eirich mixer, an induction furnace group and a resistant furnace.



Eirich sand mixer



For the contribution and homogeneous distribution of nanoparticles, a rotary degassing unit, an ultrasonic device and electromagnetically steering caused by induction are used.



The main target is to get an equally distribution of nanoparticles (SiC or TiO_2) in aluminium and magnesium castings. Nanoparticles lead to increased mechanical properties at room temperature and elevated temperatures and open a new application field for lightweight castings.



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