



## **Is registration obligatory for the molten iron produced by foundries?**

*The answer largely depends on whether it is mandatory for foundries to pre-register the scrap they use. Assuming that no such obligation exists, it will not be mandatory for foundries to register under the REACH regulation the molten iron they produce as part of their melting operations.*

While all substances must be registered under the REACH regulation, this is true for preparations only in exceptional circumstances. However, such exceptional circumstances do not apply in the case of molten iron, for this is a casting alloy ('multi-substance system') which, being a special preparation according to REACH, is exempt from the obligation to register. According to the so-called 'substance model' on which REACH is based, only those substances have to be registered that originate from a chemical reaction involving two or more substances.

It is true that new casting alloys are produced by melting down scrap and other alloy components. However, melting merely liquefies individual components which then blend into an alloy without losing their material identity. The logical conclusion is that, because the process does not produce a new substance with a hazard potential of its own, the end result is not a new substance that must be registered under REACH. This marks a salient difference between the molten iron produced in foundries and the pig iron produced by steelworks. For together with the attendant reduction, the process of smelting ore generates iron, a substance with its own chemical identity (Fe). Consequently, metallurgical plants, unlike foundries, are regarded as original producers with the obligation to register which this entails under REACH.

As molten iron is characterised as a specific alloy, the original components contained in this manufactured casting alloy have either been registered previously or are exempt from REACH as secondary materials. Registration is not mandatory in all cases where the base and the secondary material are identical, and the base material has been registered before. Foundries are not obligated to register purchased alloys because they are regarded as downstream users in this context. As alloys and their constituent elements are normally bulk goods, the presumption is that their producers or importers have registered them properly. This does not apply, however, to foundries that procure alloys or their constituent elements from outside the European Union or the European Economic Area. In this case, foundries appear as importers who have to fulfil the same catalogue of duties as any producer, meaning that they are obligated to register or pre-register.