



WASTE AND ENVIRONMENT PROTECTION MANAGEMENT OF THE TYPICAL GERMAN SMALL AND MEDIUM-SIZED FOUNDRIES

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Abstract

The paper addresses the waste and environment protection management of two typical German small and medium-sized foundries by BEVAR GmbH that provides them flexible enterprise waste and environmental management systems (FEWEMS). The main characteristics of the BEVAR's FEWEMS (objectives, targets, assessment procedures etc) are presented together with the main results of FEWEMS application to a representative medium range cast iron foundry and a small range aluminium foundry.

The authors point out that there is over 0.5 tonne of solid waste associated to each tonne of cast iron melt and about a tonne of waste associated to each tonne of aluminium melt. The average cost of waste elimination per tonne is about 12 Euro in the case of cast iron foundry and over 30 Euro in the case of aluminium foundry. There are some ways of cost decreasing of the waste elimination (recycling as fillers or raw materials, heat recovery etc) but the practice has shown that there are cost limits that could not be lowered.

The inner polluted air cleaning and air effluent filtration imply additional significant expenditures associated to foundry environmental management.

The paper underline that in the context of a complex environmental legislation, as in Germany happens, the cheapest metallurgical enterprise environment management can be performed only by companies specialized in environmental consulting because they have the knowledge and skill for the enterprise lowest cost compliance with the local in force regulation.

The authors consider that, in the light of compliance with the EU legislation, the waste and environmental protection management of German small and medium-sized metallurgical company could be considered as an appropriate model for the similar Romanian metallurgical companies.

Keywords: environment, waste, management, foundry.

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