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## Monotoring of air quality in an iron foundry(Case of NOx, SO2 , benzene and dust)

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**Abstract:** The requirements as regards ecology are imposed more and more by the legislator. The cast iron foundries, using the cupola furnace like means of fusion and several other materials for the clothes industry of the mouldsand the cores, produce a great quantity of noxious gas and dust. These polluants are discharged into theatmosphere and are very harmful for the human health of the workers and the environment bordering the sites of production. So, our study relates to the monitoring of polluting gases such as: the so nox and btx ,2continuously during a working station by passive sensors and to measure the dust level reigning in the variousworkshops of the foundry by the method of decantation (method of bergeroff). All these pollutants are knownfor their harmful effect on human health. The strategic aims had by this study is to index the atmosphericemissions, to determine the level of the air pollution generated by the activity of a manufacturing unit ofcastings out of cast iron using like moulding the traditional process, to determine the peaks of concentration ofpolluting gases (so nox and btx), to quantify and analyze pollution by the suspended particles, to work out a2cartography of the air pollution) and to compare the values obtained relating to the current situation withlimiting values who. The results of taken measurements showed a very strong pollution reaching of the values332326.6  $\mu$ g/m for benzene (c6h6), 508.2  $\mu$ g/m for the dioxide of sulfur (so ) and 722.4  $\mu$ g/m for oxides of2nitrogen (nox). The concentrations of dusts are in on this side limiting value of who. Their chemical analysisshowed the presence of much silica and iron.

Keywords : cast iron foundry, gaseous polluant, atmosphere, dust, values who.