

Ciba® Environmental Services

Case study

Situation analysis as basis for an ecologically efficient exhaust gas treatment

Background

In order to achieve economically and ecologically optimal solutions in exhaust-gas purification, comprehensive global processes are essential. The procedure as a rule comprises the following stages:

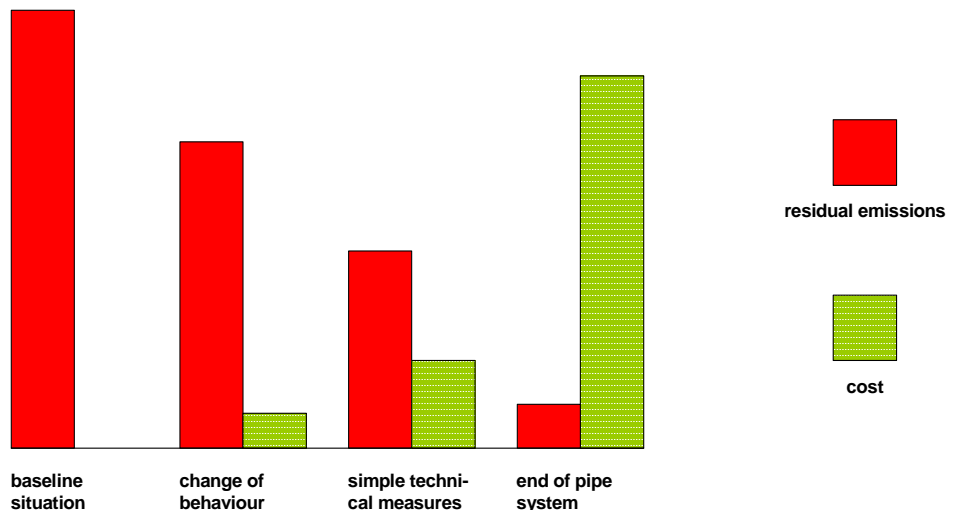
- Optimization of the production processes
- Measures taken at the source
- Training of the personnel
- End-of-pipe measures

Procedure

A carefully carried out situation analysis forms the basis for an overall economical solution for exhaust-gas problems. The analysis of the exhaust-gas situation is carried out by experienced exhaust-air specialists from ENVIRONMENTAL TECHNOLOGY. Using specially developed software and with the many years' experience of our specialists, the solvent emissions are calculated or estimated. For the purpose of simplification, the processes are divided into the various separate operations (e.g. inertization, charging of a reactor, transfer procedures etc). Depending on the requirements, the calculations can be confirmed by means of direct measurements carried out on site. The situation analysis provides a comprehensive list of the solvent emissions, whereby time fluctuations and peak contamination levels are taken into account

Effects on the exhaust gas concept

On the basis of carefully carried out situation analyses, with simple organizational and technological measures emissions can already be reduced by up to one half at the source. This procedure ultimately leads to a more economical overall solution



**Result:
an efficient exhaust-gas
concept**

Based on the situation analysis, the exhaust-air concept is drawn up in close collaboration with the client, according to the maxim, "Prevent, reduce, reuse, eliminate". Consequently the concept includes, besides the actual evaluation of the procedure, also proposals for technological and organizational measures at the source. These can be new rules of procedure at the production plant, the installation of exhaust-air separation systems or a specific pretreatment of certain exhaust-air streams. With the integrated application of the various measures for solving the problem, in comparison with the originally identified exhaust-air problem costly "end-of-pipe" measures can occasionally be reduced by a factor of 10. This leads to massive cost savings and at the same time to an ecologically efficient overall solution.

Other services

- > Determination of contaminant concentrations and loadings in the exhaust air
- > Planning and basic engineering of integrated exhaust-air purification systems
- > Planning and realization of the integration of exhaust-air streams in existing exhaust-air networks
- > Conversion of existing plant for new tasks
- > Startup of new operations and functionality testing
- > Training of production personnel in environmental questions
- > Maintenance and servicing of exhaust-air purification plants

Exhaust gas scrubbers**DISCLAIMER**

NOTHING IN THIS PUBLICATION MUST BE CONSTRUED AS A REPRESENTATION OR WARRANTY, EXPRE IMPLIED, OF FITNESS OF A PARTICULAR SOLUTION FOR A PARTICULAR PURPOSE. Any data or results given ar on controlled or laboratory work and must be confirmed by the Buyer by testing under its own conditions. Under no circurr will Ciba Specialty Chemicals be liable for any damages arising from reliance on the statements contained herein wl intended for general guidance only.