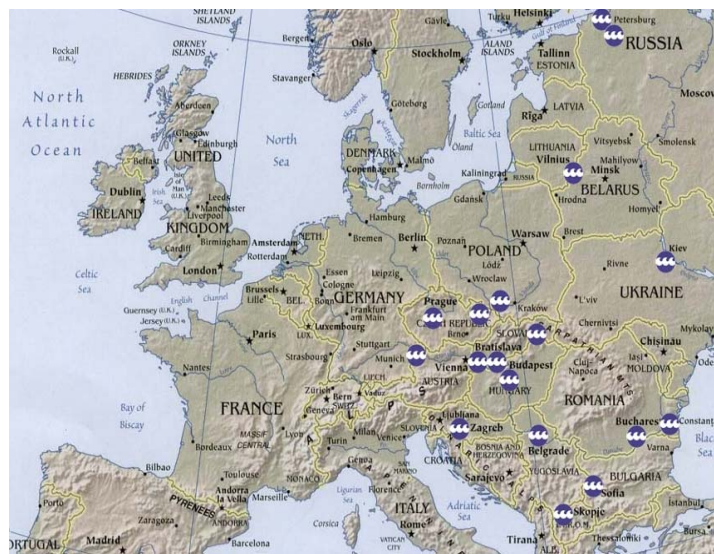


Applications for Glass and Ceramic Industry

ECM Group is built around ECM ECO Monitoring, a.s. Bratislava and is operating a network of subsidiaries and offices in countries of Central / Eastern Europe and Asia.



The Territory

ECM offers for glass and ceramic industry following applications:

- **Monitoring of O₂ and CO**
- **Heat value – fuel gas composition monitoring**
- **Mass flow controllers**
- **Working area monitoring**
- **Particle monitoring**
- **Water quality monitoring**

Monitoring of O₂ and CO

At extremely high temperatures O₂ and CO monitoring is as high as 1700°.

High temperature zirconia analyzers.



In some cases gas composition doesn't allow to insert any probes into the flue gas. In such cases tunable laser based analyzers are offering the solution.



Heat value monitoring

Stability of temperature is essence of good quality of glass or ceramic products. Depending on applications Wobbe index / heat value analyzers

On gas chromatographs monitoring composition / heat value / Wobbe index may be applied.



Mass flow control

For above mentioned stability of temperature is essential stable mass flow of fuel gas and combustion air into the burners. This mass flow control is stabilizing combustion regardless on pressure fluctuations.



CMS series
Gas mass flowmeters
400 to 2,000



CMG series
Gas flow monitors
400 to 2,500



CML series
High-flow mass flowmeter
5,000 to 7,000



MVF series
Micro Flow vortex
gas flowmeter (to
16,000m³/h, norm.)



MPC series
Panel-mounted mass
flow controller
600 to 800



CMQ series
Mass flow controllers
1100 to 3,000

Working area monitoring

ECM is providing gas, particle and heat stress monitors to make sure workers not to be exposed to conditions beyond health limits.



Beyond classical detector toxicity of several compounds which have to be monitored on very low levels while some of them are carcinogenic already at ppb levels of concentrations, portable and stationary compact GC solutions must be applied.



Particle monitoring in working area is to be monitored with portable or personal monitors and sampling pumps.



Noise and vibration monitoring must be kept within health limits. ECM is providing instrumentation for control.



Particle monitoring

Glass and ceramic industry is operating many filters. ECM is providing broad range of electrodynamic analyzers to monitor these filters.

The reason for monitoring is

- Scheduled maintenance avoiding sudden accidents
- Longer lifetime of filtration elements
- Avoiding shut down time
- Reducing product loss
- Saving money



Water quality monitoring

Glass and ceramic industry may significantly pollute process waters. ECM is offering a compact spectrometric system to monitor both organic and inorganic pollution of process water effluents of tyre plants.

Parallel to qualitative components flow, temperature and pressure monitoring are also essential tools for effective process control.

