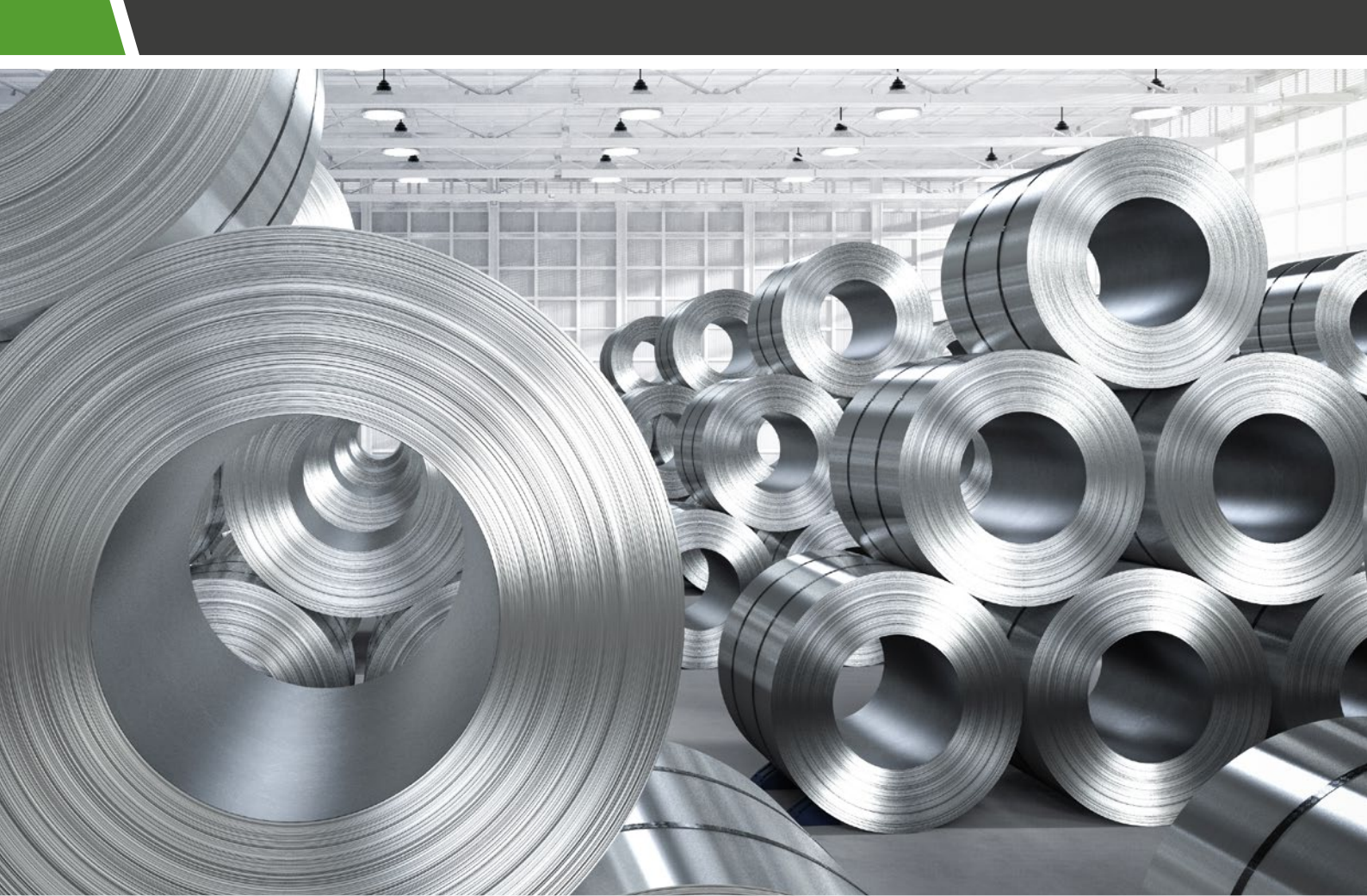


# Metallurgical & Steel Industry.

One of M&C's Core Markets. Since 1985.



### ▼ Focussing On Your Key Challenges

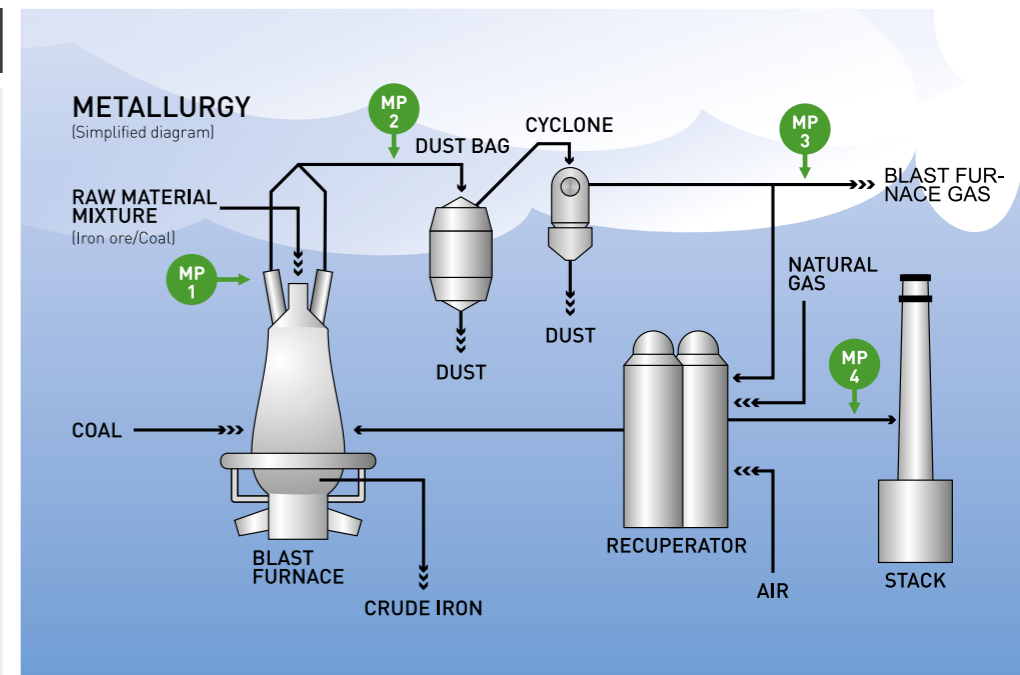
Gas analysis is an important tool in the process management of steel and metals industries – from furnace and conversion processes, to casting, finishing and rolling mills. Associated processes are energy distribution, sintering and decoking production. The main function of process control is to optimize the whole process with regard to energy and material usage as well as product quality. Important parameters for this are:

- ▶ Evaluation and management of a production process
- ▶ Influence of measured parameters on key operational performance
- ▶ Critically important gas compositions i.e. for energy consumption (fuel/air ratio)
- ▶ Risk and hazard management associated with toxic gases
- ▶ Knowledge of reaction yield through by-product analysis
- ▶ Information about corrosive gases for plant asset protection
- ▶ Gas emissions from raw materials, caused by contaminants in the ore, which need to be measurable, i.e. sulfur dioxide



### ▼ Experts in Steel industry

- ▶ Steel plants with experience of all site requirements are one of the core markets of M&C since 1985.
- ▶ M&C successfully supplies single products and emission monitoring systems and process gas analyzing systems for more than 35 years.
- ▶ M&C's customized activities include world-wide experienced technical consulting and highly qualified technical service.
- ▶ Activities involve very challenging applications for blast furnace, direct reduction, converters, electric arc furnaces.



### ▼ M&C Product Performance

- ▶ Conditioning of gases from manufacturing processes
- ▶ Appropriate corrosion-proof and temperature-resistant materials
- ▶ Filtration technologies for all expected particle sizes
- ▶ Mitigation of adverse affects of acid and water dew points
- ▶ Fulfilment of all requirements for cooling and filtration of acids
- ▶ Management of water vapor and acid dew points for analyzer requirements
- ▶ Associated optimization of sample gas pumps and filters
- ▶ Liquid and flow alarms from one single supplier "One-Stop Shopping"



M&C solution



### ▼ Additional Customer Benefits

M&C engineers are experts in most of the different processes in steel and metals industries, being highly skilled in recognizing the measurement duty and assessment of problems that have to be solved:

- ▶ Broad and comprehensive range of products with a wide variety of configurable options
- ▶ Modular structure of M&C components, and variety of materials guarantee adaptation to all kinds of customer-specific process conditions and environments
- ▶ Continuous improvements of existing products and development of innovative new products
- ▶ Easy installation, low maintenance, safe and reliable operation
- ▶ Durable premium quality products and systems with cost benefits because of extended life cycles
- ▶ Lower operational costs because of user-friendliness, ease of service and maintenance
- ▶ M&C is a leading specialist for explosion-proof design offering a wide range of technical solutions



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