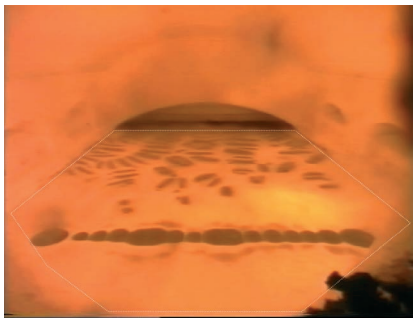
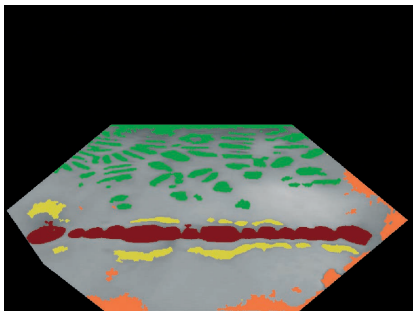
Solutions for Technology in Glass

OMC – Software picture processing of furnace camera pictures



Original image furnace camera



Objects recognized by OMC:
green - batch
red - bubblings
yellow - colder glass
orange - image error from camera

With Optical Melting Control software STG has created a tool with the ability for energy saving and quality control. Image processing and statistical analysis provides a wide range of information to use in the process control system as additional process variables.

Features

- Continuous input from the furnace camera and subsequent analyzing the pictures
- Recognition and classification of the objects:
  - Batch
  - Foam
  - Bubbling
  - Image errors
  - Additional classes
- Usable with all typical type of furnaces
- Determination of several process variables:
  - Batch coverage
  - Batch density
  - Melting gradient
  - Max. expansion of batch coverage
  - Standard deviation and coefficient of variation of batch size
  - Size of whole batch surface
  - Identifying, if surface of the batch covered area is below/ above average
  - Spread area
- Quantified observation of the melting process
- Transmit the processed data to process control system
- Creating long-term data archives for processed data
- Internationalized interface

Scope of supply

- Providing and installation of Software
- Implementation into existing Furnace Control
- Individual control strategy (STG Energy Control, STG Lambda Control)
  Patent WO2012/038482 A1- Temperature- and Symmetry Control
- Regular system maintenance

Solutions for Technology in Glass

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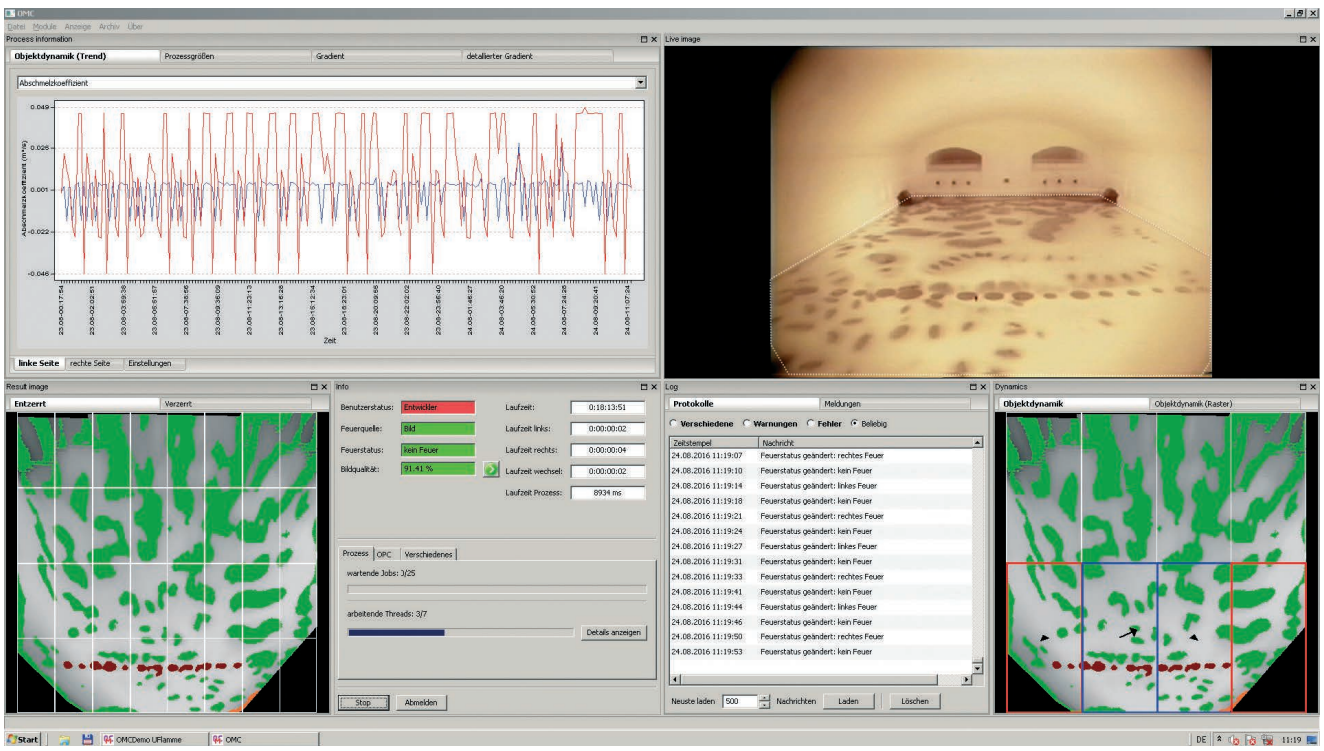
System-Voraussetzungen

- PC with Windows 7 or higher
- Framegrabber, connected with furnace camera
- Implementation into existing Process Control System via OPC to existing PLC

User Interface

- Adaptive interface with dynamic views
- Modular structure allows dynamic configuration of the processing steps and system extension
- Process logging
- Management of the long-term archives (Monitoring/Filtering/Delete)
- System settings customizable with a configuration manager



Main operation window OMC