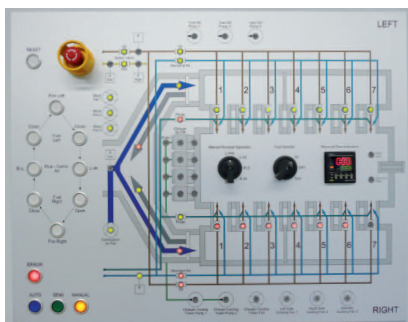
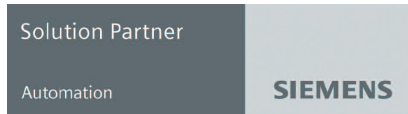




Solutions for Technology in Glass

# Advanced Process Control for glass melting furnaces Furnace – Float Bath – Annealing Lehr – Forehearth



## Scope of STG supply and services

- Planning of optimal control system design
- CAD Engineering
- Hardware planning
- Control panels assembling
- Programming control system
- Programming visualisation system
- Cabeling and field installations
- Detailed signal tests and FAT at STG
- Commissioning and Supervisor on site
- Training of staff on site and / or offline at STG
- Process optimisation

## Applications

- SIEMENS PCS7
- SIMATIC S7 /S5
- WinCC / WinTM
- SIPART Backup
- Intellution IFix
- Teleperm M
- COROS

## References

- more than 45 Float glass furnaces
- more than 35 Container and Fiber glass lines

## Certified as

- SIEMENS Solution Partner since 2007
- First SIEMENS Industry Partner »Glass« since 2008

## Extensive STG Software Library

- BTR-furnace temperature control for regenerative furnaces
- Flexible Energy Control for gas and oil simultaneously
- STG Lambda Control
- Solutions for redundant system design
- Energy Management
- Long term data bases
- Special program modules for fine tuning of reversal sequence
- Further specialized and industry proven control loops

## STG Extras

- PLC integrated Lambda-Control based on Oxygen Sensors, also for mix and Oxyfuel firing
- PLC integrated combustion calculation
- BTR furnace temperature control
- PLC integrated model based function blocks for energy optimisation and a proactive operational mode
- Automatical symmetry control of furnace heating
- Recipe management for forehearth and top roll machines
- Best available system safety due to
  - Offline tests in Cottbus with STG and customer staff
  - DCS Architecture Version 1: Redundant PLC
  - DCS Architecture Version 2: Single PLC with bumpless Backup
  - DCS Architecture Version 3: Distributed redundancy

