

Solutions for Technology in Glass

## Industrial Automation and Process Control Systems

Solution  
Partner

Automation

SIEMENS



### Scope of supply and services

- Planning of optimal control system design
- Engineering
  - Hardware ( Cabinets planning, Field planning, disposition of components)
  - Software (DCS, CPU, Visualization)
- Control cabinets assembling
  - Control panels CPU / Network / Fibre optics
  - Cabinets frequency converters
- Detailed signal tests and FAT
  - Installation
  - Commissioning
  - Process optimization
  - Documentation and Training

### Installation

- Disposition, delivery and installation of field devices (Pressure, Temperature, Volume...)
- Disposition, delivery and installation of Frequency converters
- Delivery and installation of cable trays
- Control room furniture (e.g. Desks, Video walls, Networks, Server cabinets)
- Bus systems (DP, PA, redundant, fibre-optic, copper)
- Disposition, delivery and termination of fibre optics systems

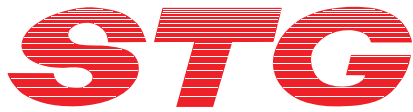
### Applications

- SIEMENS PCS7
- SIMATIC S7/S5
- Allen-Bradley (Rockwell)
- WinCC / WinTM
- Energy-data management Simatic B.Data
- Intellution iFix
- ePLAN

### Certificates

- SIEMENS Solution Partner "Process Control System SIMATIC PCS 7"
- SIEMENS Certified Specialist "Process Control System SIMATIC PCS 7"
- SIEMENS Certified Industry "Glass"

**For all typical furnace designs within the Glass Industry STG offers it's products and performances for Furnace, Forehearth, Float Bath, Annealing Lehr areas – both available as standalone or complete packages.**



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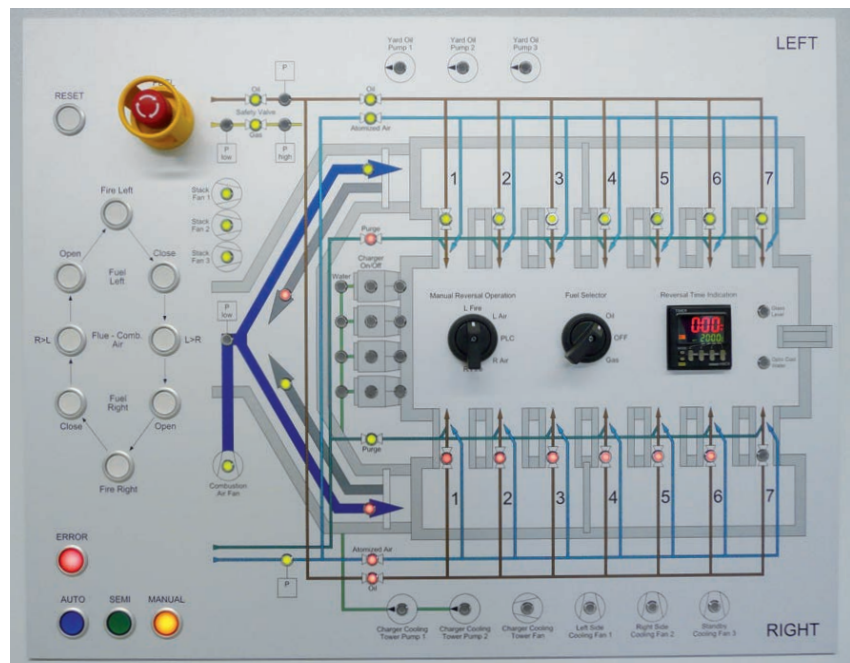


### Extensive STG Software Library

- BTR Furnace Temperature Control
- Flexible Energy Control
- Energy based Lambda Control
- Solutions for redundant system design
- Long term data bases
- Energy Management System
- Special program module for fine tuning of reversal sequence
- Further specialized and industry proven control loops

### STG Extras for glass melting furnaces

- PLC integrated model based function blocks for energy optimisation and a proactive operational mode
- PLC integrated Lambda Control based on Oxygen Sensors, also for Dual (Gas /Oil) and OxyFuel firing
- PLC integrated combustion calculation
- BTR Furnace Temperature Control
- Automatical symmetry control of furnace heating
- Recipe management for feeder and top roll machines
- Best available system safety due to
  - Offline tests in Cottbus with STG and customer staff
  - Optimized and custom-fit system architectures, e.g.:
    - Redundant PLC
    - Single PLC with bumpless Backup
    - Distributed redundancy



Reversal mimic