



西门子全球运用IEC61850规约的第100个工程实例：位于上海西南郊区的南桥500 kV变电站自动化系统已经于2005年底投入运行。西门子通过此次对南桥站交流监控系统的更换提高了上海市电力供应的可靠性。

西门子首次在间隔控单元中使用了内置的可更换的符合IEC61850规约的光以太环网交换机，便可实现冗余切换功能，这样的设置简化了设备联线从而增强了必要的系统可靠性，该项目是目前唯一在变电站中使用内置光交换机的工程。该工程的另一个特点是开关联锁功能是直接在GOOSE机制中实现的，其报文可以根据优先级别在间隔控制单元间传送。

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## 供货范围

### 供电系统

- 22面间隔测控单元屏柜
- 1面站控单元屏柜
- 1面通道监视屏柜

### SIPROTEC综合测控装置

- 17台6MD66型和10台6MD63型测控装置  
用于500KV部分间隔单元设备
- 27台6MD66型和3台6MD63型测控装置  
用于220KV部分间隔单元设备

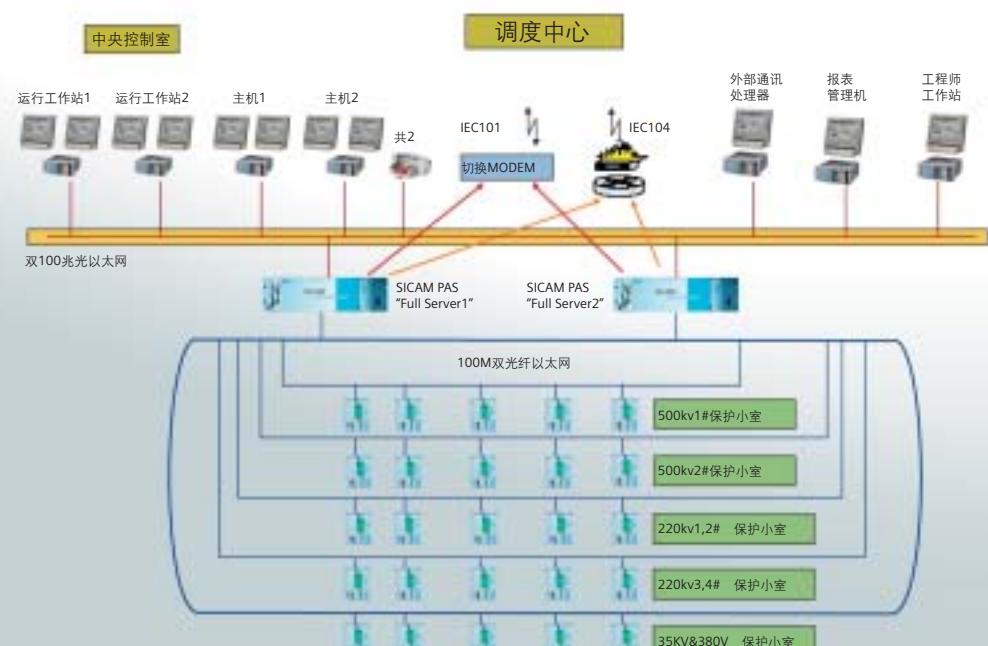
- 12台6MD66型测控装置  
用于35KV部分间隔单元设备

- 5台6MD66型测控装置  
用于380V部分间隔单元设备

- 附加3台6MD66型和1台6MD63型测控装置  
(所有装置IEC-61850规约/光纤接口)

### SICAM站控单元装置

- 2台6MD91型站控单元装置



## 南桥500kV变电站改造项目

西门子第100个IEC-61850工程在中国完成



Siemens global 100<sup>th</sup> project applying IEC 61850 protocol: Shanghai Nanqiao 500kV power automation system has been in service since the end of 2005. Solution from Siemens Power Automation Ltd. (SPA) used in conjunction with the communications standard improves network operation, thereby increasing the reliability of Shanghai's power supply. The project is one of the first in which Siemens employs bay controllers, operating with integrated and exchangeable IEC-61850 optical fiber Ethernet switches with ring redundancy function. This configuration simplifies the wiring and offers the necessary operating reliability. The use of integrated switches in switchgear construction is unique to this project. An additional switchgear interlocking level is implemented directly in the process with the aid of Goose messages, whereby prioritized telegrams are exchanged between the bay controllers.

#### Siemens Ltd., China, Power Transmission and Distribution, Energy Automation

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## Scope of supply

### Substation Automation

- 2 x SICAM PAS Full Server
- 2 x 6MD91 station unit

### SIPROTEC bay control unit device

- 17 x 6MD66 and 12 x 6MD63 devices in 500KV bay unit
- 27 x 6MD66 and 3 x 6MD63 devices in 220KV bay unit

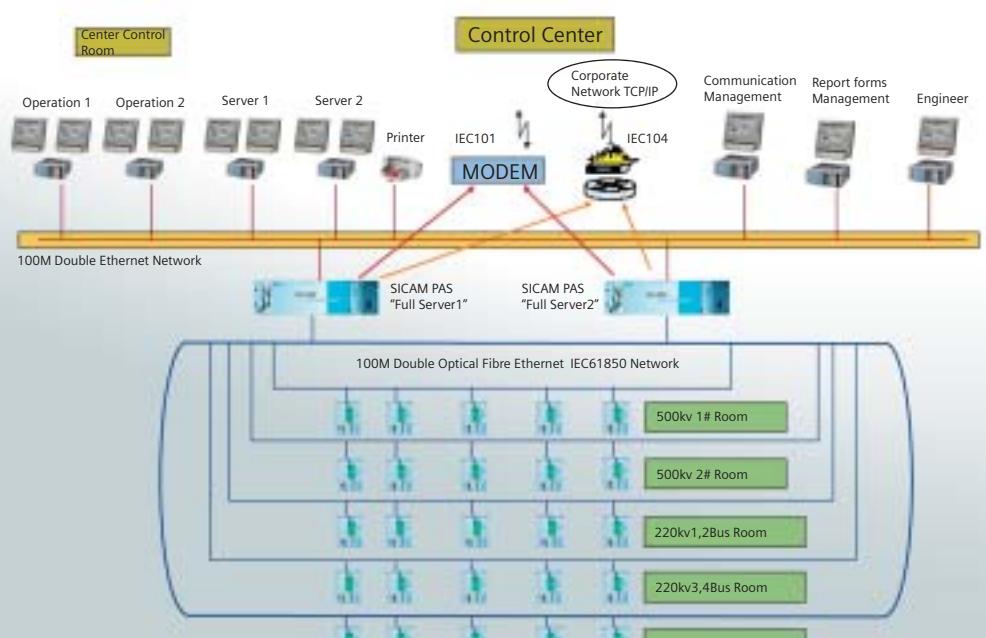
- 12 x 6MD66 devices in 35KV bay unit

- 5 x 6MD66 devices in 380V bay unit

- 3 x 6MD66 and 1 x 6MD63 devices as backup  
(All devices IEC-61850 protocol/fiber interface)

### Power supply system

- 22 x bay control unit panels
- 1 x station unit panels
- 1 x modem panels



## Nanqiao 500kV Substation Renovation

Siemens Global 100<sup>th</sup> project based on IEC 61850