

SIS / ESD Process Safety Systems

Independent safety protection for high-risk process units. EHOUSE packages SIS cabinets, safety I/O, ESD valve interfaces, cause-and-effect logic, HMI diagnostics and FAT/SAT evidence into a dedicated safety layer.

Market message

A modern SIS helps detect hazardous process conditions, execute verified safety logic and isolate equipment through ESD valves, pump trips, alarms and safe-state actions. The safety layer remains independent from normal process control while sharing operating visibility where appropriate.

01

Detect

Monitor high-high level, high pressure, high temperature, rupture / vent and other critical conditions.

02

Decide

Execute cause-and-effect logic through a dedicated SIS logic solver and safety I/O.

03

Trip

Command ESD valves, pump stops, alarms and final elements to move the process to a safe state.

Typical scope

System package

- SIS cabinet, logic solver and safety I/O.
- ESD valve interfaces and hardwired shutdown signals.
- HMI diagnostics, alarm indication and bypass management.
- Network boundary to BPCS / HMI where appropriate.

Lifecycle evidence

- SIF definition and SIL target support.
- Cause-and-effect matrix and logic documentation.
- FAT/SAT records and proof-test planning.
- Change-control and handover documentation.

Where it fits

Tank farms, chemical skids, aerosol and gas units, LNG/LVG handling, boiler and burner management interfaces, compressor packages, pump protection and other process units where a defined safe state is required.