



# SPACE ASEAN - Process Safety User Conference 2019

Experience. Technology. Community.

Process Industries and Drives



# User Case SIS FOR SYNTHOMER VIETNAM

Process Industries and Drives



## About us



### EAST SEA TECHNOLOGY ENGINEERING ELECTRICAL AUTOMATION CO., LTD

❖ ESTEC is a solution, product and service provider for Automation systems, Digitalization solutions, Industrial Software, Process instrumentation, Electrical systems, Industrial services.

❖ We are a solution partner of Siemens for Process Control System, Factory Automation, Process Instrumentation, PLM - MOM, XHQ, COMOS.

We are certified by



## VAM SAFETY SYSTEM PROJECT END-USER: SYNTHOMER VIETNAM CO. LTD



### About Synthomer and Synthomer Vietnam



#### ❖ Synthomer at a glance

Synthomer is one of the world's foremost suppliers of aqueous polymers and has leadership positions in many markets. Our polymers help customers create new products and enhance the performance of existing products in key industries such as coatings, construction, textiles, paper and synthetic latex gloves. With the acquisition in 2016 of Hexion's Performance Adhesives and Coatings (PAC) business, Synthomer grew its global manufacturing network, expanded its product portfolio and boosted its geographical presence, allowing it to better serve new and existing customers around the world.

#### ❖ Công ty Synthomer Việt Nam

Công Ty Synthomer Việt Nam chuyên sản xuất và cung cấp keo tổng hợp gốc nước chất lượng cao bao gồm: Polyvinyl Adhesives, Paint dispersion, Pressure Sensitive Adhesive.

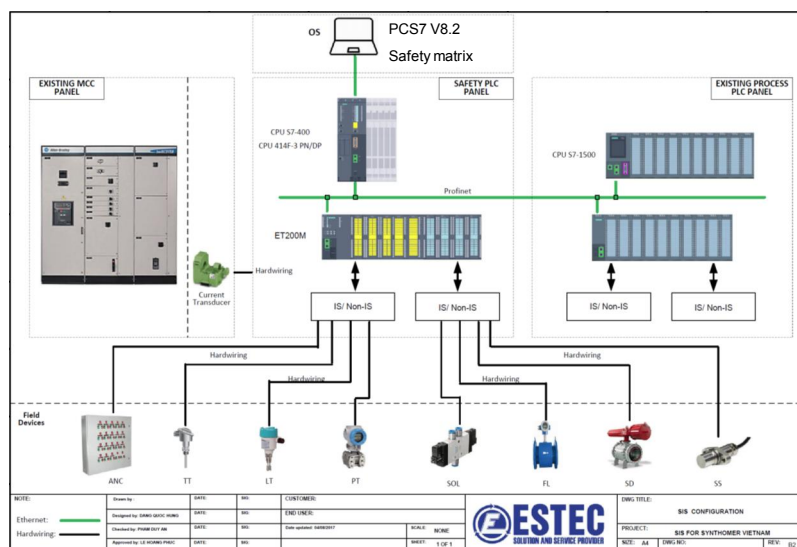
Source: <https://www.synthomer.com/>

- ❖ Synthomer Chemical plant is located in Binh Duong, Vietnam.
- ❖ Synthomer plant has existing control system with S7-1500, manual operation by console panels at shop-floor.
- ❖ Synthomer called for the bid of supplying VAM interlock safety system for their process house.
- ❖ ESTEC had proposed and supplied Process Safety System, Instrumentation, Annunciator Panels, Valves and cabling system for VAM interlock project.
- ❖ The Process Safety System is based on PCS7 V8.2, Safety matrix, S7-400 Failsafe Controller, F- IO modules, and PROFINET.
- ❖ Project execution: 2017-2018.

**Project: VAM Reactor Safety Interlock**  
**Package: Field Instrument, Safety PLC, E&I Installation**

### AMENDMENT LETTER

Synthomer Viet Nam Company Limited



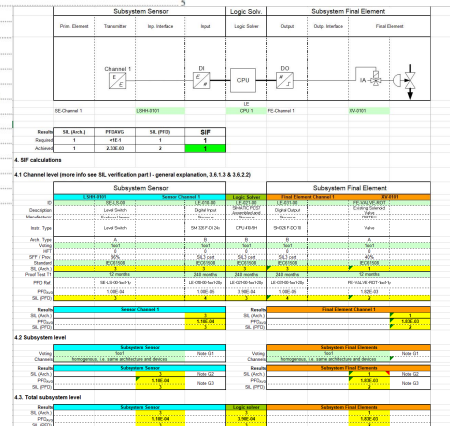
❖ ESTEC has successful supplied to Synthomer :

- ✓ Process Safety System, SIL1 achieved.
- ✓ Hardware and software engineering
- ✓ Safety Function Specification
- ✓ SIL Loop calculation
- ✓ System integration, testing and commissioning
- ✓ Training and handover

Document No.	Version	Date
SYNTHOMER	0.6	06/05/17
Functional Specification For Vam Reactor 1 Safety Interlock		Page 3 of 31

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Type	Name	SIF Description	Required SIL	Achieved SIL	Verif.	Issue/Date	Non-conformance
Cover sheet	Coversheet	Verification Reports					No Yes
History	History						
Summary							
List of Content	Content	This pages					
SIF calculation	LSHH-0101_XV-0101		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0101_XV-0102		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0101_M-0101		1	3	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0102_XV-0105		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0102_XV-0106		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0102_M-0103		1	3	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0103_XV-0109		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0103_XV-0110		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0103_M-0105		1	3	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0201_XV-0103		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0201_XV-0104		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0201_M-0102		1	3	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0301_XV-0103		1	1	OK	Rev.0.2 1/24/2018	X
SIF calculation	LSHH-0301_XV-0104		1	1	OK	Rev.0.2 1/24/2018	X



Control panel with FailSafe\_Controller, F-Modules



Pre-FAT, checking of document and software engineering



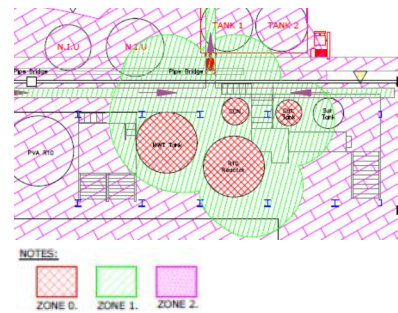
Factory Acceptant Test



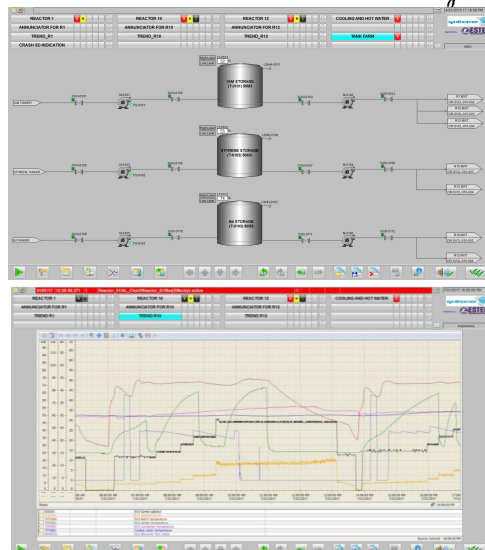
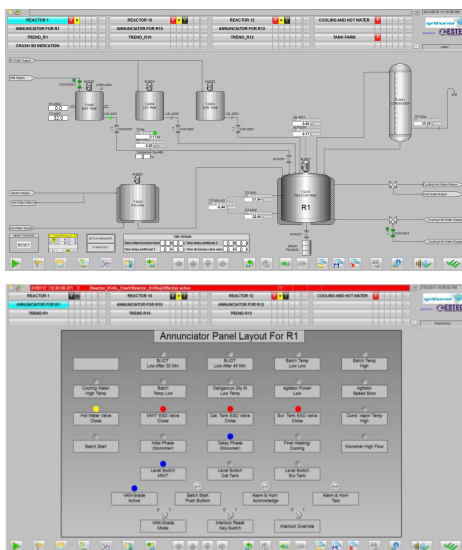
Shutdown valves and annunciator panels installed



Process instruments installed

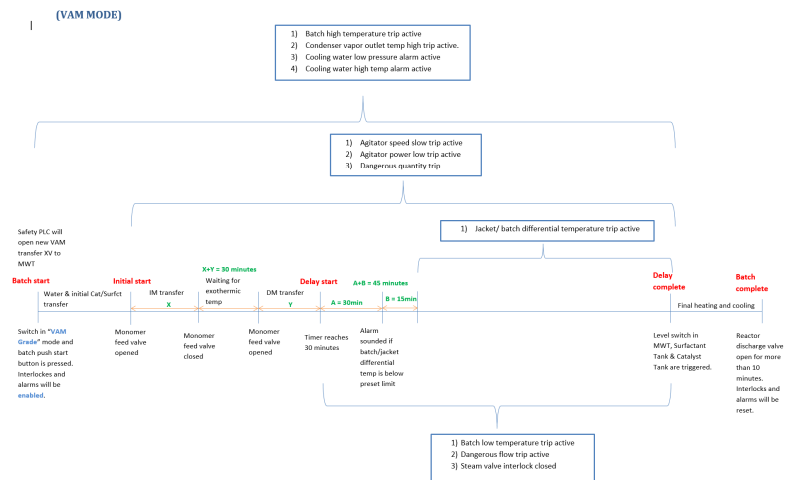


Site installation to comply hazardous classification

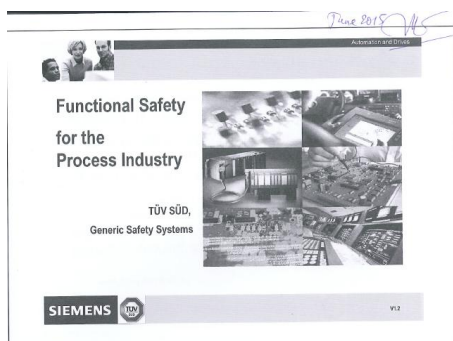




- ❖ Synthomer chemical plant has a state-of-the-art process safety instrumented system.
- ❖ The SIS have enough conditions to be verified by third party if Synthomer needed.
- ❖ The SIS helps Synthomer to reduce the risk and Synthomer now are operating the plant in the acceptable safety mode under monitor of SIS.



Thanks to Siemens and TÜV that training us about the Functional Safety for process industry, IEC 61508 and IEC 61511. After the workshop was took in June 2015 at Siemens Singapore, we can work better with our customers in Vietnam such as Synthomer to provide the Process Safety System and ICSS.





**THANK YOU  
BEST WISHES TO SPACe ASEAN 2019 !**

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