



# *HIPPS Project References*

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Tecnimont - 18 February 2016



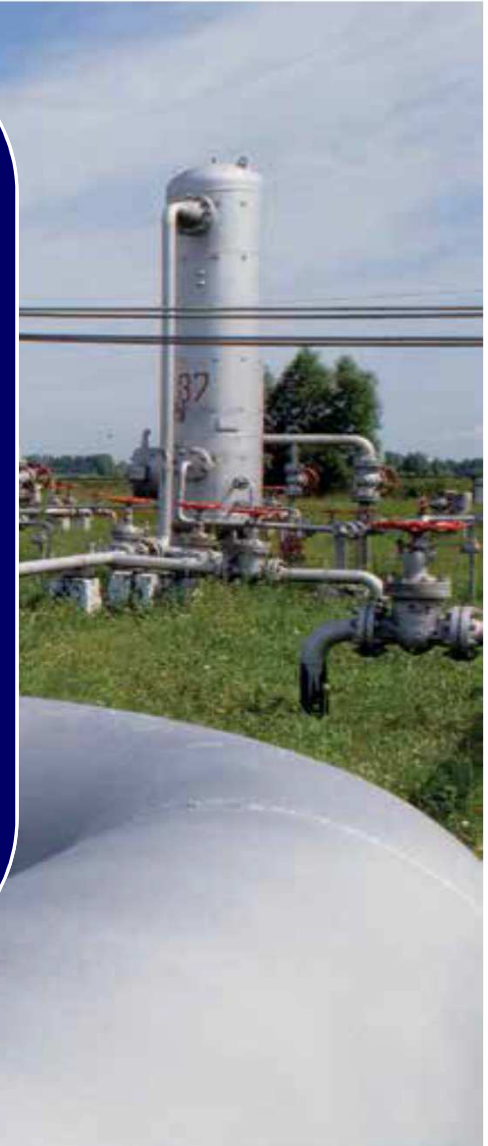
# *HIPPS Gas Storage plant - Italy*

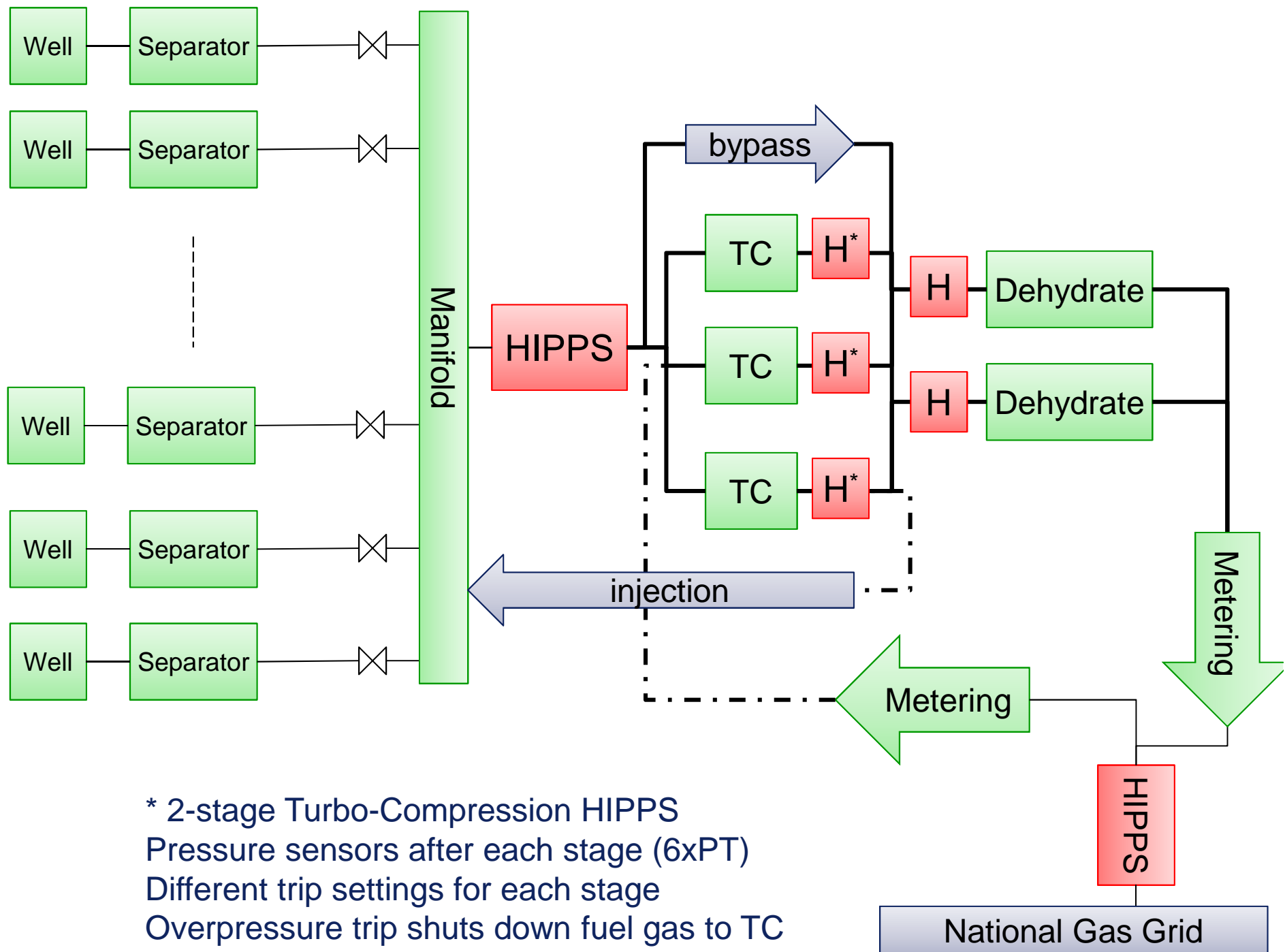
## 9 HIPPS:

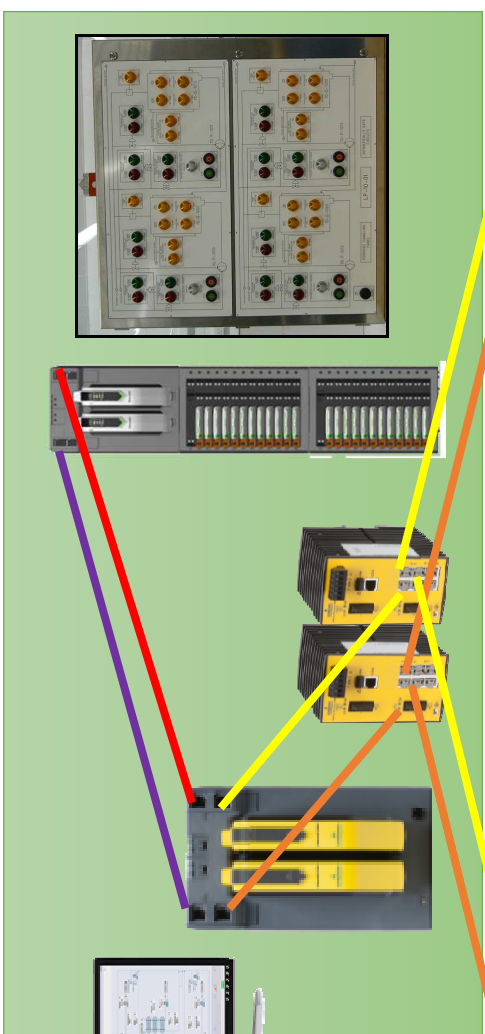
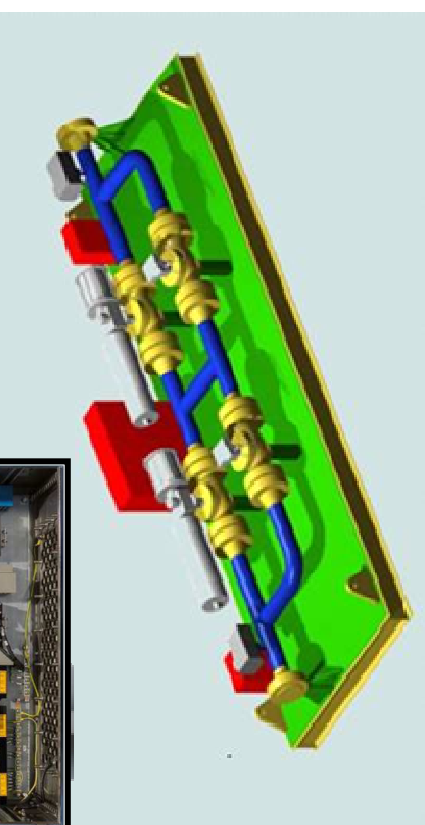
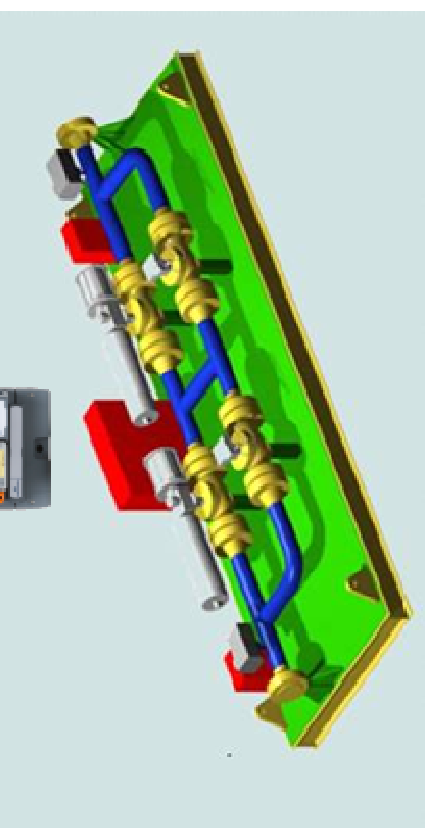
- 1 HIPPS on Manifold
- 3 HIPPS on Turbo Compressor Fuel Gas (2-stages)
- 5 HIPPS on Gas Treatment Units

## Noteworthy Comments:

- 36 x 2051T Pressure TX's
- 9 DeltaV SIS CSLS Logic Solvers with Electronic Marshalling
- 12 non-EMR Hydraulic positioners + actuators
- 6 SIS Pneumatic Valve Ctrl with DVC6200
- 18 non-EMR Valves (4" to 28")
- AMS Software + ValveLink for Diagnostic and PST
- Partial Stroke Test via HART to DVC and to hydraulic positioners
- Independent CSLS for each HIPPS
- common control network to HMI and ICSS and common safety network across CSLS's









# ***HIPPS Cabinets Installation Central Electrical Room***



One Logic Solver  
for each HIPPS  
(3 cabinets + 1)



Intrinsically Safe  
PT inputs

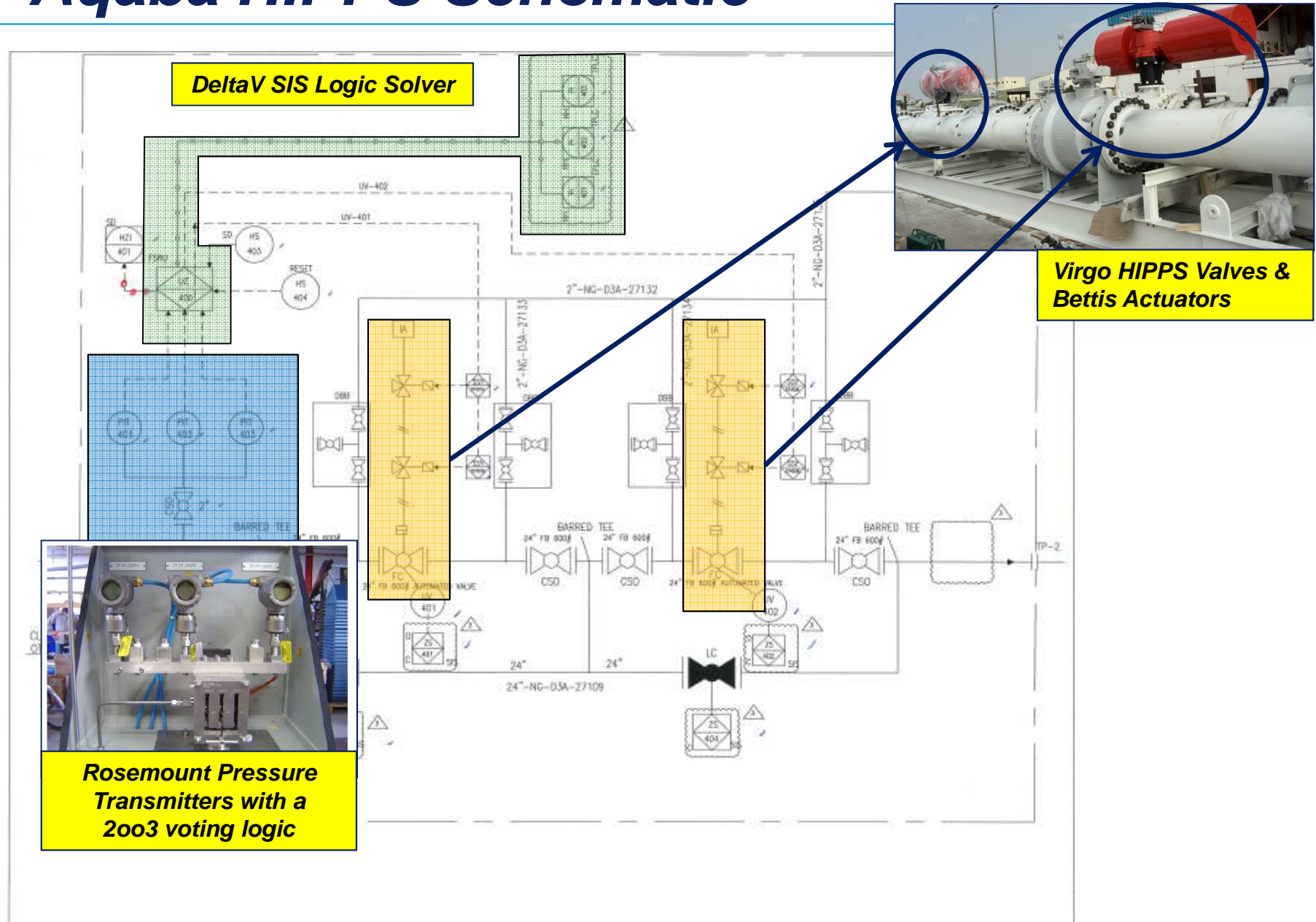
# Aqaba LNG Terminal - Jordan

## Emerson Solution:

- Skid mounted HIPPS system with build-in bypass
- Pressure Transmitters & skid instrumentation
- DeltaV SIS Logic Solver
- Bettis actuators with Fisher DVC
- 2 x 24" Actuated Virgo Valves
- 6 x 24" Manual valves
- Skid Integration
- Full project service:
  - Engineering
  - SIL Verification
  - Integration Testing
  - FAT and SAT
  - Validation
  - Compliance reporting



# Reference project: Aqaba HIPPS Schematic





# Complete Skid Mounted HIPPS Solution from Emerson





# ***Gorgon HIPPS - Australia***

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**Gorgon have 3 x LNG trains**

**Supplied from 2 x 36" 1500" pipelines.**

**Each 36" pipeline is split into 4 x 24" 1500# HIPPS**

**3 x 24" HIPPS in service**

**1 x 24" HIPPS for testing without**



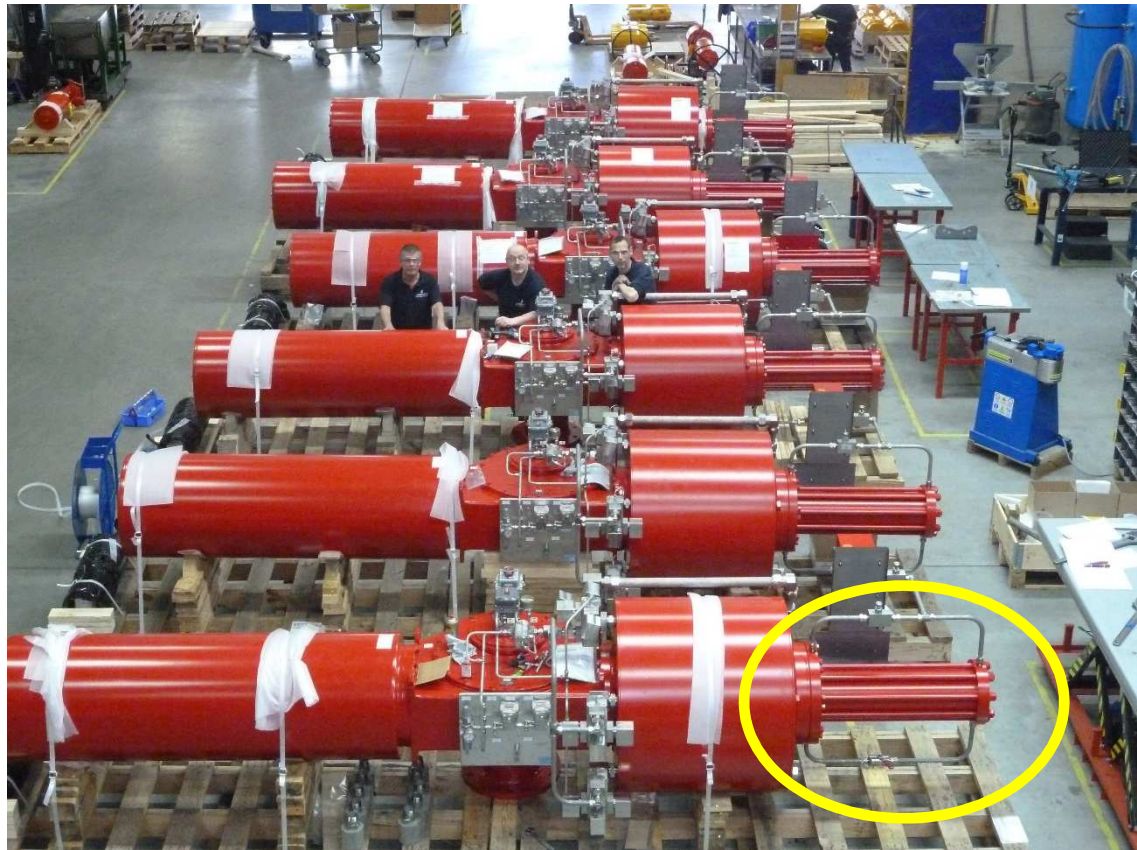
# ***Gorgon HIPPS - Australia***

**24" 1500# Ball valves**

**Shut down in < 3 Sec**

**Full stroke Damping**

[HIPPS test - Gorgon](#)





# ***Gorgon HIPPS - Testing***



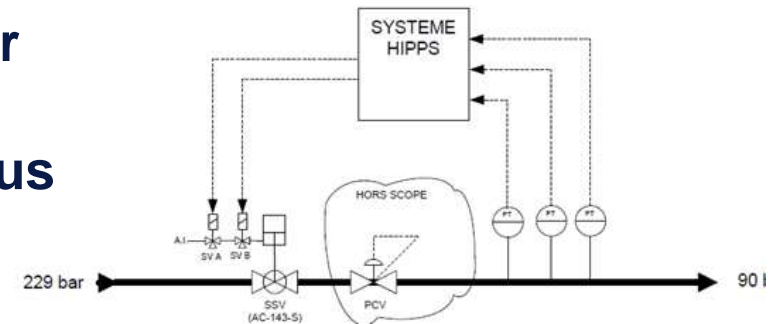
# Underground Gas Storage Hauterives, France

storengy

1 HIPPS for high pressure, and 2 HIPPS for Medium Pressure  
Standalone DeltaV SIS, with a serial Modbus link to an existing control system  
local HMI (buttons, lamps)

High availability and diagnostic functionalities  
Smart voting system (2oo3, 1oo2)

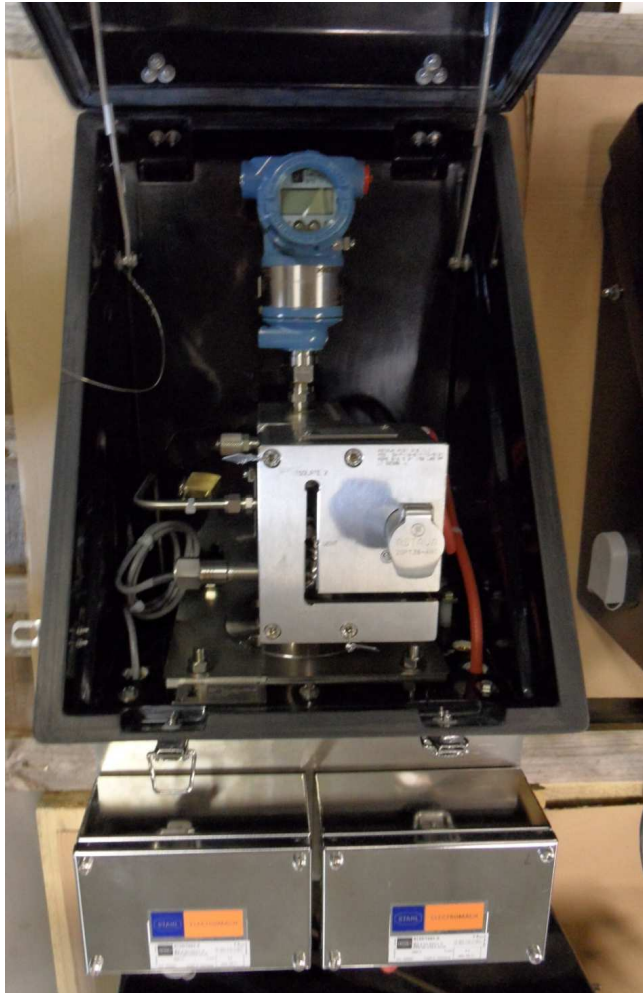
Project scope:  
DeltaV SIS Logic Solver  
Pressure Transmitters (3051S)  
High Integrity Manifolds  
Valve positioners with PST  
SIL review by independent third party





# ***Gas Storage Project Details***

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# ***Reference project: West Qurna II HIPPS Lukoil - Iraq***

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Emerson scope:

- 10 x HIPPS systems
- Bettis G-Series SR Actuators with full stroke damping
- Valbart 14" 900# Ball valve



Process Management

Network Power

Climate Technologies

Appliance Solutions

**When the stakes are high**

Industrial Automation

Motor Technologies

Professional Tools

Storage Solutions



# EMERSON

**CONSIDER IT SOLVED.**