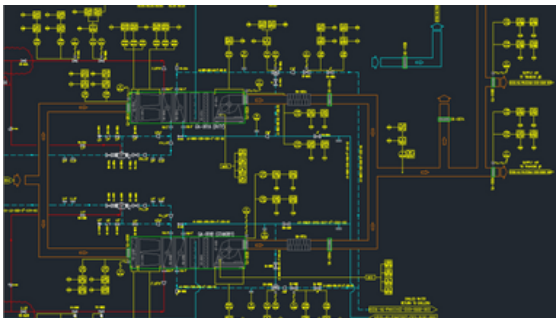
ON-SHORE PROCESS FACILITIES (SIS 8) - KASHAGAN (KZ)

Sector: Oil&Gas

Year: 2009-2010 (2012 Commissioning)

Place: Kashagan, Kazakhstand

Client: AGICP CKO



OBJECTIVES

In the framework of the **Kashagan Development Experimental Program – On-Shore Plant 1st Phase** – four unmanned buildings of the SIS type (Satellite Instruments Shelter) were planned, equipped with Blast and Fire Resistant walls. These buildings are meant to contain the instrumentation and the electrical and control panels necessary for the management of an on-shore plant for the preliminary treatment of crude oil, in the northern shore of the Caspian Sea.).

MAIN ACTIVITIES AND SOLUTIONS

The external atmosphere is classified as dangerous, due to the presence of corrosive and harmful gases, such as strongS and SO2. This peculiarity requires the presence of a 15 meter chimney in order to guarantee to the HVAC system an explosive-gases-free air intake, and of a chemical filtration group for the inlet air.
To avoid the contamination of the internal atmosphere, the HVAC plant is designed to maintain a +50 Pascal pressure difference with respect to the external atmosphere.
Unlike the SIS 1-2-4 projects, this time the TRILLINI Engineering was in charge of the design of the whole HVAC plant for the SIS 8 Building, from the preliminary study to the detailed design of the components. The company was responsible also for the design of the electrical instrumental system, of the compressed air distribution plant, and of the Fire&Gas system. Every building included a battery room, which required the employment of Atex material for Zone type 1, IIC, T3, due to the possibility of hydrogen formation.
The Fire&Gas system is mainly responsible for smoke detection, by means of optical detectors and air sampling devices (High Sensitivity Smoke Detector Panel). The system monitors the presence of toxic and flammable gas in the inlet air, thanks to dedicated sensors.

Characteristics:

- External operating condition: -36 C to 45 C – RH 100%;
- Corrosive and explosive atmosphere (strongS-SO2);
- Internal atmosphere pressurization: +50 Pa;
- ATEX;
- HSSD – High Sensitive Smoke Detection.