



SeeTec Solutions for the Oil and Gas Industry

Safe processes with video technology

Despite of the development of alternative and renewable energies, oil and gas still represent the engine of the world economy. Exploration takes place under increasingly challenging conditions often in remote locations. Security requirements, already high, continue to rise. This is not surprising as incidents during up-, mid- and downstream processing can cause immense damage to people and the environment. Video technology systems from SeeTec help detecting situations at an early stage and thus assist in avoiding consequences – at all process levels.

■ UPSTREAM – EXPLORATION AND MINING

Video technology is generally used on drilling vessels and – platforms to monitor the drilling and mining process and to ensure the staff's safety. SeeTec Cayuga can easily be integrated into this process and also into higher level systems such as DCS for example. Video is then a part of an overall solution using TCP triggers or I/O modules to communicate with the sensor- and control technology. If for example a sensor detects high pressure in the system, an

automatic video fly-out window showing video streams of relevant areas is displayed on the screens in the control room. SeeTec Cayuga also supports thermal cameras. Using them, high temperatures can be detected based on the colors displayed. Using video technology critical situations can be detected and validated much faster, giving staff more time to react on the basis of more information.

■ MIDSTREAM – LOADING, TRANSPORT, TEMPORARY STORAGE

Especially the transportation of gas and oil from the production sites to the refineries and the tank farms is a dangerous process. Big parts of overland pipelines lead over uninhabited areas without significant infrastructure, making the monitoring of leaks complicated. Also in politically unstable regions the risk of attacks is a serious threat. If the transportation is done by sea the risk of damage and harm

affects not only the vessel but also has impact on the environment. Using SeeTec video management software pipelines are monitored permanently over long distances even if there is only low banded infrastructure. By using intelligent video analytics and by linking to process monitoring systems the attention of the security staff is drawn to possible dangers or incidents.

■ DOWNSTREAM – PROCESSING, STORAGE

Next to the operational safety in refineries and production plants, safeguarding against unauthorized access is an important issue. SeeTec video systems provide protection for every need. With SeeTec the building perimeter is continuously monitored. Through the integrated video analytics and the additional analytics interface to third-party applications an automatic perimeter protection is supported. So, for example, a person trying to climb over the premises' fences will be visualized automatically on the Client in the control room. A built-in license plate recognition solution and the integration of access control applications complement the SeeTec range. In the refinery the video

system can also be seamlessly integrated into production processes. It is possible to trigger alarms or other actions over sensors or management systems by using TCP signals or I/O-modules. SeeTec's modular architecture makes it easy for the product portfolio to grow with increasing demands and/or the growing operational areas. Using distributed installations it is possible to combine several locations to just one bandwidth-optimized system. An extended safety structure ensures that the system keeps on recording images and stays in operational mode even if the management or recording server fails.

■ RETAIL – SALES

Gas stations are at the end of the value chain. They are not struggling with process safety but with robberies and thefts. SeeTec delivers video solutions, which perfectly reflect the branch structure of such a business. SeeTec keeps the costs for the camera infrastructure low by realizing a bandwidth-saving usage involving several locations and by using intelligent camera features (VCAM). At the gas station the video technology can also be connected directly to the business processes, so for instance it is possible to combine the video images coming from the pump or the cash area with the accounting data by using the SeeTec POS-Interface. With the automatic license plate recognition a petrol theft can be identified easily – if a car, which already was registered with a tank fraud, is recognized in front of a gas pump, the pump can be locked.



■ YOUR BENEFITS

- Modular and flexibly expandable solution
- Support of a great number of cameras of all leading manufacturers (incl. thermal cameras, LPR cameras, outdoor cameras for special requirements)
- Integrated video analytics and license plate recognition
- Communication with third-party systems using TCP signals or I/O modules (Moxa, Adam etc.)
- Easy handling and operation, also on touch-based systems or mobile devices
- Project experiences and certifications in the oil & gas-sector