

Secure, solid, specific

PetroChina approves the use of Weidmüller's SIL 3 certified safety relays, explosion protected distribution enclosures and specially adapted interface units for the automation of the processes within their new oil refinery. They meet the high demands of the process engineering.

PetroChina is the largest Chinese oil company and belongs to the state owned China National Petroleum Corporation (CNPC). 10 million tonnes of crude oil should be processed and 1 million tonnes of ethylene produced at the new Fushun refinery in Liaoning province. The refinery is an important pillar for PetroChina's strategic development and will help ensure efficient distribution of oil resources in North East China.

Reliable emergency shutdown

The refinery should automatically take countermeasures where there is imminent danger to guarantee safety. This includes completely shutting down system components, a task Weidmüller's safety relays were designed for. "In applications like ours dangerous situations can lead to serious consequences. Therefore the relays used must meet higher safety levels, just like Weidmüller's products which are certified by the TÜV to SIL 3 standards", explained Liu Ping, director of Instrument Department CNPC Fushun Petrochemical. "We were also impressed with the high quality of the safety relays. We can rely on them to ensure that the emergency shutdown

will always happen reliably in our safety critical applications."

Customer-specific assembly in the shortest possible time

Customer-specific fitted Klippon® CB enclosures were chosen for the distribution solution. The CB variety is an enclosure made of stainless steel. This has been specifically designed to meet the requirements of the Chinese market. The enclosures are certified by the Chinese NEPSI certification body as well as having ATEX approval. The finer details of the enclosure solution were incorporated by Weidmüller in close cooperation with PetroChina to meet the requirements of the refinery. "As the Fushun plant does not face the sea we recommended that the enclosures were made of 304 grade stainless steel. They are cheaper than 316L grade stainless steel enclosures, but give sufficient protection in this case where the air is not so corrosive", explains Weidmüller China's Oil & Gas Segment Manager, David Lee, about the consultation that was provided to PetroChina. "Another advantage of the enclosures, which impressed the user, was

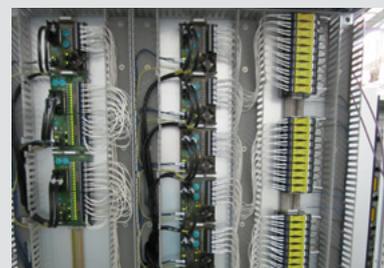
the covers which can be simply locked using a padlock. Compared with a screwed-down cover, our solution saves significant amounts of time." The final deciding factor for PetroChina was the short delivery times for the customised enclosure solutions. An experienced Weidmüller team in China carried out the customer-specific assembly of the screw connection terminals and the explosive-hazard safe cable glands in the shortest possible time.

The interface units were also customised, here Weidmüller used the established SIMATIC PCS-7 control system from Siemens. These modules have a dual function. They operate both as an interface and also as a relay module. Their interface function uses single conductor wiring and a pluggable connection which results in big time savings. As a relay module they process analogue as well as digital input and output signals. This reduces the number of modules and therefore the space needed in the electrical cabinet.

Weidmüller, with these product solutions and their service and support, has proved itself the ideal project partner for PetroChina. The planners of the refinery will benefit from safe, solid and specifically matched connector systems and electronic components.



Klippon®-CB-Edelstahlgehäuse sind auf die speziellen Anforderungen des chinesischen Marktes zugeschnitten



SIL-3-zertifizierte Sicherheitsrelais und speziell angepasste Übergabeelemente von Weidmüller in den Schaltschränken der Raffinerie Fushun