

A €370,000 investment in Centro Colombo's gas network to minimise safety risk

At Sonae Sierra we aim towards zero accidents in our shopping centres and are committed to eliminating Safety and Health (S&H) risks wherever we identify them. Gas leaks from equipment and systems are uncommon but they may create significant safety hazards as any ignition source can lead to an explosion.

Our team at Centro Colombo, in Portugal, detected that we could minimise this risk. Due to the characteristics of the existing natural gas network in the shopping centre, a significant volume of gas was permanently present inside the building and occasionally loose gas accumulated in some parts such as false ceilings, ventilation ducts, and technical areas. Although the possibility of an explosion or other incident remained unlikely, this situation created a risk demanding our attention and which we were eager to eradicate.

In July 2010 we contracted a service provider and started to work in cooperation with our design team and tenants to solve this issue. It soon became evident that the scale of the work was momentous: kilometres of pipes were located inside the buildings, most of them out of sight and out of reach. Many taps and valves were 'hidden away' or had difficult access. Worst of all, the existing layout meant that about 32,000 litres of gas were stored at any given time inside the shopping centre.

A complete overhaul was required; from the municipal gas delivery point down to the meters dispatching the gas to our 34 tenants. In order to avoid causing financial losses to our tenants, the shopping centre needed to remain fully operational. Another challenge we faced was to maintain the gas supply constant to keep the co-generation system working.

We began by designing the new external layout. We then started installing the network on the rooftop, but we had to re-organise and adapt it to fit around the roof garden. We installed new supply control points, to detect potential fires, gas leaks, and electrical failures. A manual shutdown valve and emergency shutdown push buttons were also fitted on the rooftop and in every shop respectively. Finally, we neutralised all the gas remaining inside the building to eliminate any potential hazard.

After spending a significant sum of €370,000 to ensure the highest standards were applied, the project was completed in August 2011, and all our efforts rewarded. The



reconfigured network in the shopping centre and every single shop was inspected and certified compliant with national and local S&H regulations. The risk of explosion is now kept to a minimum thanks to the externally located pipes which are always well-ventilated. In spite of the risky working conditions due to the nature of the project, there were no accidents to declare among our staff and the contract workers. In the future, we expect that this intervention will generate cost savings by lowering our insurance premium.