



17.12.2004 | Corrosion protection: big job of 70,000 square meters

Scaffold erection and corrosion protection work at Norwegian gas processing plant

In Kolsness south of Bergen, Statoil, Norway's biggest energy company, operates a gas processing plant in which gas from the so-called Troll Fields in the North Sea is extracted, processed and finally pumped by pipeline to the European continent. The existing plant is currently being extended to include two new complexes. For the construction of the new installations, the expertise of Gelsenkirchen's PeinigerRöRo GmbH has been called for. Acting on behalf of Linde AG, general contractor for the construction project, the service provider has carried out scaffold erection and corrosion protection work.

About 2,500 metric tons of Modex scaffold materials have been used to enable all the trades to set up and assemble the numerous pipelines, which dominate the scene at the natural gas processing plant, and all the other plant components. Because the work on the scaffolds was accompanied by earth moving, PeinigerRöRo's scaffold erectors were requested above all to install suspended structures, which were tied with steel tubes and couplers to existing steel components. In this process, the scaffold specialists had to comply with the provisions of the Norwegian scaffold specification E 500, which differ from those of German standards.

Specially coated

The steel structures and pipelines installed for Linde were preassembled in Germany. Here, again, PeinigerRöRo's corrosion protectors were involved, initially sweeping these parts at the new blasting center in Gelsenkirchen and then applying a two-pack epoxy resin coating. On site in Norway since February of this year, they are now in the process of repairing any peeling or scratches that may have occurred during transport and assembly, and painting the pipes' weld beads arising during assembly. The latter also have to be blasted beforehand. To keep pollution to a minimum, PeinigerRöRo has opted for the so-called Vaku-Blast process, which involves using a special device on which the blast nozzle is situated in the middle of the blast head and surrounded by dust suction nozzles. This way, the abrasive residues and dusts are extracted at source during blasting. The coating system applied depends on where the component concerned is located in the installation. Some of the pipelines, for instance, are thermally coated with an aluminum-magnesium alloy by electric arc spraying, while the steel structures are given a polysiloxane topcoat. The main job involves the coating of a total of 50,000 square meters of steel structures and 20,000 square meters of pipelines.

Elaborate coordination

It is efficient coordination above all that is responsible for the high quality of the work performed. In view of the frequent rainfall in Norway, causing the corrosion protectors to repeatedly down tools, the pressure of deadlines is extremely tight. Moisture forms a separating film on the surface being coated, preventing proper adhesion of the applied paint. Only those few sections of the plant where blasting is carried out are enclosed. "The deadlines on which the individual sections have to be handed over to the customer have already been set," says Thomas Pahle, as project manager responsible for corrosion protection. So that they can be met, sufficient men have to be available on site to make up for lost time on dry days.

Rotation

What makes matters worse is that Statoil has ordered that no employee may spend more than 168 hours on the site per month. This is why the men involved always work for three weeks on site and then travel home for a week, so that there's rotation. "You could say we're caught up in a vicious triangle of weather, deadline pressure and our own aim to have as few employees on site as possible," explains Pahle. The health, safety and environmental standards demanded by Statoil are also stricter than those in Germany. The coating materials used by PeinigerRöRo first have to be released by the works physician. And despite the Company's SCC certification, all of the equipment used on site has to be specially inspected by Statoil. "This project is certainly no easy job," Pahle sums up. "But what would work be without the daily challenges?"

Ulrike Grönefeld

ThyssenKrupp Services

Tel.: 0211-967 5792

ulrike.groenefeld@thyssenkrupp.com

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