

description with map of the entire facility. Thereafter the inspection team was taken on a guided tour of the facility and was shown storage tanks and depots, production plant, laboratories and administrative buildings. It was decided that the inspection should cover the entire facility, with emphasis on the reaction step. Each of the inspection team pairs was escorted by a member of the facility staff.

### Results of the inspection

#### Production equipment

The inspected facility is a modern plant with multipurpose vessels of high quality. The multipurpose vessel inspected was also resistant to corrosion. The reaction vessel could be sealed immediately on arrival and it was possible to obtain samples at any time during the process. Organic solvents were supplied by a complex system of pipelines, parts of which were difficult to trace. There was a supply of fresh air to each manufacturing area and this air-supply could be connected to masks for the personnel operating the plant.

#### Analysis

Samples were collected from all the chemicals added to the reaction vessel and also from the reaction vessel at different intervals. During the reaction the waste from the scrubber could be collected and analysed. It was also possible to collect samples at the end of the process from the mother liquor before and after it had been neutralized. The amount of thionyl chloride could be estimated from flow rates and chloride-ion analysis.

The reaction mixture in the vessel was studied with thin-layer chromatography, which made it possible to follow the removal of reactants and the appearance of products.