

TRAINING PLANT

December 2007

Construction of the Process Units



Final stage in the construction of the Training Plant.

The end of 2007 must be associated with the start of the final stage to realise the Training Plant, which is the ambitious project of the STC-Group on its premises in Brielle that was initiated 4 years ago. The last months a lot of effort has been put into the project to reach this final stage. At this moment a lot of attention is given to the wiring and the control systems of the Training plant. The expectation is that the energy distribution systems and the control systems will function by the end of January. The hardware that is needed for the control systems and the MES-application are already available and installed. Currently the software that is needed will be developed in different stages. The major part of the mechanical construction of the individual process units has been completed and these units will be tested thoroughly in the coming weeks. The last unit which is under construction is Unit 400, filtration with furnace.

Currently a team of specialists is working to finalise all the mechanical and piping activities. The units will make use of the most modern techniques and since these become

more complex, due to their high IT-standards, it will demand a significant period of time to coordinate the start up of the individual units and to achieve a stable process. Technical specialists and lecturers put themselves in the position of an experience operator during the realisation of the Training Plant, therefore they will acquire a better practical oriented knowledge which is more than welcome during the construction and configuration of the individual process units.

The educational aspects of the Training Plant will be monitored carefully and guaranteed by the lecturers. Next to that they will examine the use (application) of the process units in relation to educational and didactical models. The management the Training Plant is the responsibility of Ton Knecht who has been involved in the project 4 years ago. Ton has gained a lot of experience in the field of engineering and project management. He is responsible for the finalisation of the Training Plant and in the near future also for maintenance and exploitation.

The construction of the process units, which can be seen as mini-factories, requested a lot of time. The five last process units have been constructed at the location in Brielle. This was very efficient and saved a lot of time. The construction of an individual process unit in the Training Plant takes around three months; compare this to the construction at a local site which easily takes around 1 year.

You will find the following subjects in this newsletter:

- Construction the Process Units
- 'Market place for Innovations within the Process Industry'
- Next level:
Process Centre of Excellence

The Training Plant on the premises in Brielle is an initiative of the STC-Group, Deltalinqs and KMR. The Training Plant consists of 9 process units, in which the latest technologies will be implemented. Besides the Foundation Fieldbus technology, also Profibus DP and PA technology, ASI-, LON-, Devicenet- and Hart technology are available in the Training Plant.

Together with the 9 process units, a separate state-of-the-art control room will form the Training Plant in Brielle.

The Training Plant is to be used in the educational program to become a Operational Technician, during Process Operator courses, Foundation Fieldbus courses and several other short courses.

A large number of partners are involved in the project and donate time, money or instrumentation and equipment.



The construction of the process units in the Training Plant itself became possible when the physical building of the Training Plant was constructed. The first strategic step to become a Process Centre of Excellence has been taken with the finalisation of the Training Plant. The second step was made during the creation of a physical Marketplace for Innovations within the Process Industry. This project will be explained later on. The third stage to become a Process Centre of Excellence, which is although still in project application stage, is the last subject of this newsletter.

'Marketplace for Innovations within the Process Industry'

The project 'Market place for Innovations within the Process Industry' includes a number of activities which is aimed to position the Training Plant more widely than solely as an educational centre. This is as a result of the large amount of enquiries received from the companies, research and educational institutions from the industry in their search for an independent research and development facility. The STC-Group wants to arrange this by means of a granted subsidy within the framework of the regulation 'Pieken in de Delta' arranged by the Ministry of Economy.

The final goal of the Training Plant is to become a Process Centre of Excellence which can be used by the (petro) chemical industry in the region. By means of the granted subsidy the Training Plant can be used as a 'Market place for Innovations within the Industry' where several parties can meet each other. The 'Market place' can be used for several events like a product demonstrations, seminars, testing of new instrumentation, network meetings, etc. From invitation to catering, the STC-



Group can arrange such an event for potential customers who would like to make use of the Training Plant.

Next to that the Training Plant can also be used by to introduce new innovative techniques within the industry. Innovative ideas can be developed more thoroughly within the Training Plant and to use it as a beta site. New innovative ideas can be introduced to several parties within the industry to gather additional knowledge and by involving end-users during the process. This will stimulate the innovative behaviour of the industry. Next to that the Training Plant can be visited by partners and their customers to give a live demonstration of the latest equipment range.

The Training Plant is also available for research and educational institutions. The STC-Group will put a lot of effort to make the training plant accessible for higher and scientific education. There are possibilities for curriculum development, thesis / practical assignments and gradua-

tion papers. Next to its own educational program, the STC-Group puts the emphasis on the involvement of professional and scientific educational institutions.

The Market place is created to share knowledge and experience between companies within the industry and educational institutions.



Next Level: Process

Centre of Excellence

Next to the project 'Market Place' the ambition of the STC-Group is to make transfer the Training Plant into a Process Centre of Excellence. This policy of the STC-Group was supported with results of several brainstorm sessions held with the industry. During this session the following subjects were discussed:

How can (new) **innovative techniques** be implemented?

How can we **guarantee that the knowledge is kept and disseminated** within the industry due to the process of demographic ageing?

How can we assure as much as possible that **knowledge will be available**?

The STC-Group strives to become an open knowledge and innovation centre for the industry within the region.

To achieve this goal, funding has been requested at the Ministry of Economy based on the above mentioned questions. After the funding is granted, the STC-Group will start a track to become a Process Centre of Excellence within four years.

With respect to process to assure and to share knowledge one of the activities will be the development and implementation of a content management system. The system will be accessible for several parties within the (petro) chemical industry. The goal is to create a good structured encyclopaedia, which contains up-to-date information. The development of simulation programs in which all individual process units of the Training Plant can be simulated is another major activity.

The STC-Group guarantees that it offers education, which is funded on the requirements of the industry. Therefore the STC-Group puts the emphasis on the continues interaction with the industry.

The Training Plant educates and trains the operator of the future, for this reason the STC-Group goes beyond 'practical focused methods' for its students and lecturers. In practice it will take around 7 years to become a fully trained professional. The goal of the STC-Group is to reduce this period of time by letting the students get aquatinted with the facilities available in the Training Plant. Students will get familiar with all possible aspects of their future profession.

After a first start in 1995, the STC-Group has brought high quality technical education into the spotlight again. The interest for courses and education within the (petro) chemical industry is continuously growing the last years. One of the reasons is the increasing interest for education





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Please visit our website (training-plant.nl) for more information regarding the Training Plant and other activities of STC- Group, location Brielle. Or you can contact:

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