

Process Intensification Quick Scan May 2008

Referentienummer: P015608051
Dossiercode; 0156-08-03-42-008

PI Quick Scan MDI plant Huntsman Rozenburg

Process:

A Process Intensification Quick Scan session was held January 17th, 2008 during which the MDA and MDI technology of Huntsman Polyurethanes was reviewed. This was done based on process flow diagrams (PFDs) of this technology as built in China, which is heavily based on the technology in Rozenburg, Zuid Holland.

The PI Scan team included 2 external experts and 3 experienced Huntsman process development engineers. As the whole process was covered by a one way secrecy agreement there were no problems in sharing either the PFDs or some of the high level economics of the process. Some pre-work had been undertaken by the external experts based on block-flow diagrams sent out prior to the meeting.

As a pre-meeting had been held with the experts it had already been identified that the MDI process could be classed as complex, the actual scan meeting of 4 hours could never therefore hope to cover every aspect of the process in detail.

After an initial foray into the economics of MDI manufacture both the MDA and MDI plant PFD were examined and explained. Certain areas of the plant had more time devoted to them where the external experts felt there were significant PI possibilities, those areas that were deemed to be less fruitful were quickly skipped.

Results:

A number of weeks after the meeting a draft report was sent to Huntsman and reviewed by the attending engineers. After commenting the final report was issued, discussed in a close-out meeting where it was shared with technology stakeholders from the wider business, and then distributed internally to the full global technology community.

Of the 12 PI recommendations made, 3 confirmed the relevance of projects already in progress, 4 were deemed not possible, with the rest either new areas to think about or areas already on the radar screen but not yet progressing. These areas will be further worked up and introduced into the innovation database for assessment by the global community.

In general there were only a few recommendations that were outside the box of ideas already considered, but even so the exercise was deemed to be valuable as it did re-enforce areas of work already ongoing or being considered.