

## Master Thesis Brief Description

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<b>Thesis Title</b>	<b>Simulation of Natural Gas dehydration process using triethylene glycol</b>
<b>Programme of Studies</b>	MSc in Oil and Gas and Offshore Engineering
<b>Course</b>	MOE 518 Master Thesis
<b>Area of Study</b>	Processes Modelling and Simulation
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<b>Semester</b>	Spring Semester 2015
<b>Short Description</b>	Dehydration of natural gas is the removal process of water associated with natural gas. Well fluids that come from the reservoir to the production platform are passed through a series of separators that will separate gas from oil and water. The water in natural gas can cause problems for the production process, transportation, storage and use of the gas. In order to avoid these problems the gas has to be dehydrated. This study dealt with dehydration of natural gas. Possibilities and different ways of dehydration methods were described and compared. Triethylene Glycol (TEG) process was chosen to be the best due to its absorption capacity, low cost of operation and low energy consumption. The dehydration process is divided into two sections: dehydration and regeneration. With the use of HYSYS software, the dehydration section was simulated. Parameters that affect efficiency of the dehydration section such as GCR, inlet gas temperature and number of trays in the absorber were simulated and analysed.