

PATENT N°FR0100651

PROCESS FOR GAS DRYING AND INSTALLATION FOR THE IMPLEMENTATION OF THE SAID PROCESS

A large number of gas dehydration plants use water absorption by triethylene glycol (TEG).

The common procedure is to put the gas in contact with 98.7% wt TEG which allows a gas water dew point of around $-10\text{ }^{\circ}\text{C}$ to be reached. The diluted TEG obtained at the contact or outlet is regenerated by atmospheric distillation. The water content of the regenerated TEG cannot be reduced below 1.3% wt due to thermal degradation of the TEG.

To obtain a lower water dew point, higher regenerated TEG concentrations are necessary.

Most commonly, enhanced regeneration systems are based on the reduction of the partial water pressure in the vapour phase above hot regenerated TEG by way of stripping or condensation of water.

This patented process is based on the reduction of the water content in the TEG, directly in the liquid phase, by using a solid desiccant, avoiding the use of gas or solvent for stripping, or a cooling loop for water condensation.

This process can achieve regenerated TEG concentration of 99.9 % wt.

This process can very easily be implemented on existing units in order to improve their performances in terms of water dew point reduction.

