



Programa EngIQ – Edição 13 – Informação adicional dos projetos

Projetos de doutoramento com início em outubro de 2021.

EngIQ_BD2021-02: 1,3-Butadiene extractive distillation solvent swap implementation in an existing plant. **Empresa:** Repsol

Repsol Polímeros (RP) has its Petrochemical Complex in Sines (CIS), in which there are six plants. “Base Petrochemicals” consists of the Ethylene Plant (Steam Cracker), Butadiene, MTBE / ETBE and the Harbor facilities. The “Derivative Chemistry” consists of the High-Density Polyethylene Plant (HDPE) and the two Low Density Polyethylene Plants (LDPE). It has a thermoelectric power plant to produce steam and power supply and, several utilities production units fundamental to the site operations. The RP has around 500 employees and an average of 450 contractors. The total production of Olefins and Polyolefins is 1,000,000 t / y.

The draft Commission Regulation would supplement Annex XVII of REACH with a new entry restricting the placing on the market, use and manufacture of N,N-dimethylformamide (DMF):

(1) Obligation to update registration dossiers and Safety Data Sheets (SDSs) with new Derived No-Effect Level (DNEL) values

(2) Establishment of corresponding occupational limit values

The DMF restrictions are still under evaluation and a 2-years transition period would apply to these provisions. However, soon, an impact in the industry is expected in those plants where DMF is used, mainly regarding the new occupational limit values.

Butadiene plants, with ZEON technology use DMF as solvent agent for its extractive distillation units.

An opportunity in the industry exists to evaluate the possibility to change the process scheme of those butadiene plants and adjust it to a new optimum REACH compliant solvent agent.

There are 49 plants worldwide licensed with ZEON’s GPB process for butadiene extraction technology, in which 8 are in Europe

O diretor do EngIQ

Prof. Fernando Martins, UP-FEUP