RECP Best Practices Catalogue

Phosphorus Pentoxide Loss Tracking

Developed within the framework of MED TEST II

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

switchmed

The SwitchMed Programme is
funded by the European Union

Best Practice - Phosphorus pentoxide Loss Tracking

SECTOR:	**Chemical and Pharmaceutical**
Branch:	Manufacture of basic chemicals
CATEGORY	Process control or modification
APPLICABILITY	Process

COMPANY SIZE	493

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Description of the Problem (Base Scenario):	Currently, the analyses of different flows are carried out, and the overall efficiency in Phosphorus pentoxide (P205) is monitored, but the distribution of these P205 losses in the different releases is not systematically quantified, reported and analysed in order to propose performances improvement measures.
Description of the Solution	We recommend, as a first step, to conduct an analytical follow-up of the various P205 losses (the reporting can be done within the framework of the MFCA monitoring), distinguishing between crystallized P205 and soluble P205. In a second step, and based on the results obtained over a significant period (at least 3 months), improvement measures based on the Pareto principle with evaluation of the gains and costs will have to be implemented. Those measures may be of the repulping and additional filtration type, by using the potential overcapacity of the filter presses in order to recover as much P205 as possible, while taking into account additional costs (electrical energy, steam consumption, consumables and staff expenses, etc.)

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Economic Gains	There is an expected gain of 1% P205, or 500 tP205/year, representing a potential saving of € 200,000
Environmental Gains	Reduction of waste (3.2%)
Health and Safety Impact	-

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Capital Investments & Financial Indicators	€ 8,000 Immediate Return on Investment
Supplier Information	-
Other Aspects	-
Implementation	Planned measure

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