DCP PRODUCTION TECHNOLOGY

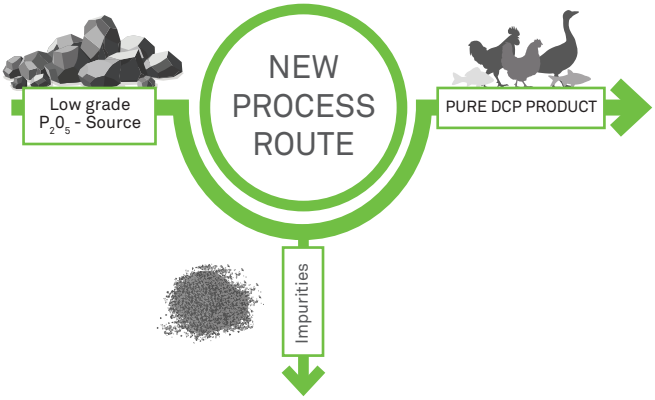
Prayon Technologies

OUR IDEAS MAKE PROFITABLE PLANTS

NEW

INTRODUCTION

In front of the growing world population and to optimize earth's resources, phosphate industry must be innovative and keep on providing technologies to face changes. During last years, **Prayon Technologies** developed and patented a new route to process phosphate raw material with low P_2O_5 content or with high level of impurities. P_2O_5 is extracted from rock and finally recovered by precipitation as di-calcium phosphate (DCP).



APPLICATIONS

Level of impurities in the final product is reduced through the new process.

DCP produced is pure compared to the original rock. It can be further processed through a conventional acidulation route to produce phosphoric acid (fertilizer quality) and purified gypsum.

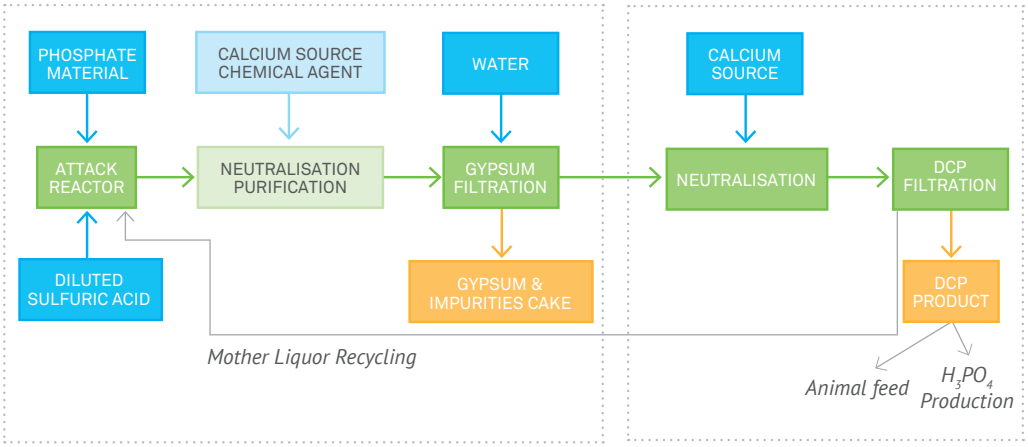
It can also be used directly for animal feeding applications.

PROCESS DESCRIPTION

It consists of two main steps:

+ **Attack** of the rock in diluted acidic conditions
+ **Precipitation** as DCP by addition of calcium source

Impurities from the rock are removed with the gypsum produced through new process.



New **Prayon** process produces DCP from low-quality raw materials while using diluted sulfuric acid, a reagent available in any phosphoric acid plant. Impurities are discharged along with gypsum, a common by-product in the phosphoric acid industry that can be stacked following the same environmental rules.

Diluted conditions lead to an economically-interesting material selection for the DCP plant. If DCP is used as raw material for a phosphoric acid plant, expensive alloys can be avoided as corrosive and abrasive elements have been removed from DCP through the new process.

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