Horizon2020 Information Days on Public-Private Partnerships

Brokerage event 21 October 2014

Valorization of organics from waste water, and re-use

Marc Esch (Arkema) marc.esch@arkema.com Jacques KERVENNAL (Arkema Consultant) jacques.kervennal@arkema.com





Sales: 6.1 B€ 14000 employees (1200 in R&D) 90 W.W. plants

High Performance Materials

Industrial Specialties

Coating Solutions

World of high value and innovative solutions

- Specialty polyamides
- Fluoropolymers
- Adorption/filtration (CECA)
- Organic peroxides

- **Global and integrated** industrial niches
- Thiochemicals
- Fluorochemicals
- PMMA (Altuglas International)
- Hydrogen peroxide

Solutions for decorative paints, industrial coatings and high-growth acrylic applications

- Acrylics
- Coating resins
- Photocure resins (Sartomer)
- Rheology additives (Coatex)















Application domains

- Refrigeration
- Automotive and Transport
- Water & Environment
- Building
- Pulp & Paper treatment
- Food Industry
- Renewable Energy



Project idea

Manufacturing chemicals lends sometimes to generate waste waters :

- Disolved organic compounds remain present as some extent in such waters,
- Their extraction and re-use in the process could bring benefits in term of environmental impact, and raw material savings

Reduce the wastes in process water is an important objective.

→ Creating a « COD valorization tool » could create an improvement gap

The proposal is to take benefit from new technologies to define a process to separate & recover organic compounds (more precisely acid & alcohols) from the waters in order to purify & re-use them.



Expected impact

- The Stakes are in terms of raw material savings, and of environmental impact reduction.
- Reduction of COD in waste waters in earlier process steps will also decrease energy consumptions of water treatment processes from « Process to River » (link to water calls- EIP WATER)
- A such project can allow to recover several hundred tons of organics



PROJECT CONSORTIUM

- We are opened to participate in collaborative projects with
 - Companies having the same care.
 - Companies developping suitable technologies (membranes,...)

- The project is linked to:
- KC1 (Feed). See KA1-2: Optimal valorisation of waste & side streams as feed.
- KC4 (W2R).
 - See KA4-3 topic2: Technologies for treatment of process & waste streams for reuse & recycling.
 - See KA4-2 topic8: New technologies for selective separation of valuables from process industrial waste water.



CONTACT DETAILS

Marc Esch (Arkema) / <u>marc.esch@arkema.com</u>

Jacques Kervennal (Arkema Consultant) jacques.kervennal@arkema.com



Sustainable Process Industry through Resource and Energy Efficiency

WWW.SPIRE2030.EU