RECP Best Practices Catalogue

Optimisation of cooking couscous

Developed within the framework of MED TEST II

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INDUSTRIAL DEVELOPMENT ORGANIZATION

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The SwitchMed Programme is
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Best Practice - Optimisation of cooking couscous

SECTOR:	**Food & Beverage**
BRANCH:	Bakery and farinaceous products
PRODUCTS:	Couscous and pasta production
CATEGORY	Process Optimisation
APPLICABILITY	Process

COMPANY SIZE	400 full-time employees

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Description of the Problem (Base Scenario):	Couscous cooking is done by direct steam injection. The steam (120 °C, 2 bar), heats the couscous and causes the degradation of the starch which is necessary to ensure complete degradation. The company consumes 1.35 kg of steam per kg of couscous for cooking. In modern equipment, the consumption is ~ 0.5 - 0.8 kg of steam per kg of couscous.
Description of the Solution	The action is to install a flow meter at the cooker inlet to optimise the amount of steam depending on the amount of semi-finished material at the cooker inlet. . 

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Economic Gains	Total economic gain: € 19,641/year
Environmental Gains	Water gain: 4,104 m^3/year (5.6%) Energy gain: 4,303 MWh/year (5.8%) Material gain: - Pollution reduction: 870 tons CO_2 emissions/year (3.5%)
Safety and Quality Impact	Better quality couscous

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Capital Investments & Financial Indicators	Investment € 21,000 Time for Return on Investment: 1.3 year
Supplier Information	Instruments suppliers
Other Aspects	-
Implementation	Under implementation