Introduction to “NPFP” Project
Prof. Alessandro PIRONDI - Centro Interdipartimentale SITEIA.PARMA, Università di Parma
The project aims at developing and applying new paradigms to achieve breakthroughs in the design, construction and operation of machines and plants for the food industry. The new paradigms have been implemented to a pre-industrial demonstration level.

PARADIGM 1 DEMONSTRATOR ELEMENTS
Aimed at the rationalization of components and cost, increase of yield and of hygienic design

14:45 Rotary manifold used in filling machines
Filippo DAZZI - SIDEL
3D printing and bulk ceramic components for improved cleanability and longer maintenance interval

15:00 Filling machine reduced laminar flow tunnel assembled by adhesive bonding and/or Friction Stir Welding
Filippo DAZZI - SIDEL
Bonding and Friction Stir Welding for the assembly of AISI 316 carpentry as alternatives to TIG welding

15:15 Ultrashort-pulsed-laser textured tunnel and pipe outer surfaces
Dott. Gianmarco LAZZINI - Centro Interdipartimentale SITEIA.PARMA
Pulsed-laser treatment to increase surface hydrophobicity

PARADIGM 2 DEMONSTRATOR ELEMENTS
Aimed at modeling and interpretation of the phenomena involved in the physical treatment of food products, for a more efficient and effective automation of food processing

15:30 Corrugated surface heat exchangers
Prof. Fabio BOZZOLI - Centro Interdipartimentale SITEIA.PARMA
Experimental identification of heat exchange models and optimization

15:45 Twin-screw pasta extruders with optimized performance
Prof. Roberto MONTANARI - Centro Interdipartimentale CIPACK
Computational Fluid Dynamics (CFD) models for design and optimization

16:00 “Digital” homogenizer for milk and derivates
Ing. Leonardo MAGGI – GEA Mechanica Equipment
CFD simulation and real-time direct control of homogenization degree

VERIFICATION OF HYGIENE AND SANITARY REQUIREMENTS AND OF PROCESSES QUALITY

16:15 The evaluation of the hygienic design of food-contact materials developed in NPFP project
Prof. Davide BARBANTI - Centro Interdipartimentale SITEIA.PARMA
Laboratory tests and techniques

29 May 2018, 14.30 - 16:30, Pavilion 5 - GAMMA Room
The event is free of charge, limited places available
Participants have to send an e-mail to ricerca@confind.emr.it

Laboratories and Innovation Centres

Participating companies

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