



COOPERATION UNDER HORIZON 2020

NAME OF ORGANIZATION

Industrial Institute of Agricultural Engineering

CONTACT PERSON

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ORGANIZATION TYPE

RESEARCH INSTITUTE

LOCATION

POLAND
Wielkopolska (region)
60-963 Poznań
ul. Starołęcka 31

FIELD OF INTEREST



- Environment, waste, recycling projects
- Biomass production lines
- Efficiency analysis projects
- Agriculture mechanical engineering projects
- Rapid prototyping technologies (3D scanning, 3D printing, CAD)
- Materials engineering, wear assessment, durability increase

INTEREST IN HORIZON

- material engineering - increasing the wear resistance by application high resistant metal surface layers by laser cladding method,
- the increase of effectiveness in biomass processing and production from renewable energy resources,
- 3D CAD modeling agricultural machine design of construction and operation properties (FEM analysis, CAD),
- 3D scanning of structural and architectural (small and large objects) using photogrammetric systems and high-precision 3D scanner,
- rapid prototyping and 3D measurements including designing, modeling and wear assessment
- analysis of chemical composition of samples with spectrometric method μ XRF, EAGLE III and SOLARIS PLUS,
- active thermovision in non-contact, non-destructive testing of internal structures of objects (temperature recording with high resolution),
- Innovation in SME's.

SHORT DESCRIPTION OF ORGANIZATION

Since Industrial Institute of Agricultural Engineering (PIMR) 1946 we have been conducting research and development work contributing to the technological progress of agricultural machines and vehicles, implementing the results of our research in practical agricultural applications. PIMR is cooperating with other institutes, universities and industrial organizations in Poland and abroad. We are designing and testing machines for new agricultural technologies as well as improving the quality of machines and their elements.

Department of Agricultural Machines Materials Testing and Development deals with the development of innovative, safe and sustainable technologies and applications of materials in the manufacture and operation of agricultural machinery. Team which is using the latest equipment and computer laboratory, conducts scientific research in the field of material engineering in several kinds of projects: R&D, goal-oriented, European etc.

The activity is supported by close contacts with industry and other research institutes, as well as by well-equipped laboratories and advanced computing facilities.

Our largest knowledge and experience is in the subject of material engineering, strength of materials, surface engineering, polymeric materials, rapid prototyping, laser metal deposition.

We would like to emphasize that we have a modern measurement equipment, especially:

- Laser metal deposition for laser cladding, Trumpf Trucell 3008 with laser Trudisk 1000 machine,
- high resolution 3D scanner and Digital Photogrammetry system for large objects and deformation measurements, GOM ATOS II with the system TRITOP 3D,
- X-ray fluorescence spectrometer Eagle III which study of chemical composition of substances from potassium to uranium, at the level of detection of the apparatus,
- emission spectrometer SOALRIS CCD PLUS for chemical analysis of steel and cast iron,
- infrared thermal camera SC 620C FLIR SYSTEM of high resolution,
- high speed camera Fastec 4,
- 3D printers: Stratasys Dimension 1200es (Rapid Prototyping) FDM and Makerbot Replicator 2X,

Our team activities are also described on our website: <http://www.pimr.poznan.pl/tt/EN/>. If you are interested in our offer and you can anticipate our participation in s project, please contact us.

EXPERIENCE



AGRO ITSM
advanced farm management

Increasing the efficiency of farming through open standards based AGRO IT platform, period 2014-2016



New logistic chain on biomass from pruning
Development and implementation of a new and non existent logistics chain for biomass from pruning, period 2013-2015



IEE/09/764 EFFICIENT 20 European Farmers and Foresters Involved for Contributing to an Intelligent Energy Network Towards the Target of 20% reduction in fuel consumption, period 2010-2013