



Boletín nº 171 de Oportunidades de Cooperación:

**Nanotecnologías, Tecnologías de Producción,
Construcción, Materiales, Transporte**

(Diciembre 2018)

NANOTECNOLOGÍAS

Technology Offers

- Layer-by-Layer nanoscale coatings, surface modification, micro encapsulation and bead based microsensors (pH, temperature, oxygen, chloride, bioanalysis) for co-development of innovative applications
- Cost-effective encapsulation of active agents or drugs to be released against pollution, corrosion, or medical condition
- Innovative fragile crystalline material wafer scribing/dicing technology and optical engine offered

Research and Development Requests

- H2020 DT-NMBP-03-2019: Manufacturers of spun-laid or dry-laid non-wovens sought for testing and introducing nano(particle) enabled surface functions such as fire retardancy, hydrophobicity, anti-microbial etc.

TECNOLOGÍAS DE PRODUCCIÓN

Technology Offers

- French SME specialized in precision cleaning for high-tech industries is looking for technical partners
- Composite bio-compatible material on the basis of titanium alloys and vitreous carbon coating intended for endoprosthesis
- An Italian inventor designs an innovative toothbrush for more effective cleaning
- A silent and compact micropump with ultra-smooth flow and rapid response for Medical, Life Science and Environmental applications; ranging from...
- Innovative fragile crystalline material wafer scribing/dicing technology and optical engine offered
- Nanoceramic coating for light alloys, superior to anodising and plasma electrolytic oxidation (PEO)
- Dutch developer and manufacturer of metal sheet machine with focus on roll forming is looking for cooperation based on a commercial agreement with...

Technology Requests

- Looking for manufacturer of metal bellows expansion joints
- A Chinese company is looking for modular integrated design and control technology for intelligent lubrication system of new energy vehicle
- Looking for a manufacturer of tungsten shielding elements

Research and Development Requests

- H2020 DT-NMBP-03-2019: Manufacturers of spun-laid or dry-laid non-wovens sought for testing and introducing nano(particle) enabled surface functions such as fire retardancy, hydrophobicity, anti-microbial etc.

CONSTRUCCIÓN

Technology Offers

- Epoxy resin filled with organic-inorganic filler, based on agricultural waste, decreases friction and increases wear resistance by 75% is offered under licence agreement

Research and Development Requests

- H2020 LC-RUR-11-2019-2020: sustainable wood value chains: seeking cluster, industrial and R&D partners

MATERIALES

Technology Requests

- Looking for manufacturer of metal bellows expansion joints
- Seeking partners with expertise in high-tech textiles and novel polymers to develop ecological garments
- Looking for a manufacturer of tungsten shielding elements

TRANSPORTE

Technology Offers

- Spanish company offers mobile survey technologies applied to roads for assessment of transport infrastructures.
- Novel lightning threat indicator easily usable in meteorology, mainly to indicate the lightning threat (e.g. in operation of airports)
- Access to information contained in motor vehicles by implementation of optical wireless
- Remote structural health monitoring of civil infrastructure
- Handheld and stationary gas leak detectors for quick and highly-selective detection of gases like methane, propane, carbon dioxide, hydrogen, ammonia...
- Underwater communications technologies and systems expertise offered to companies

Technology Requests

- H2020: Operating companies dealing with ports, boats, rivers, channels or beaches monitoring are sought for use cases implementation in the topic MG-2-8-2019



1. NANOTECNOLOGÍA

Technology Offer

Layer-by-Layer nanoscale coatings, surface modification, micro encapsulation and bead based microsensors (pH, temperature, oxygen, chloride, bioanalysis) for co-development of innovative applications

Summary

The German SME focuses on three technologies in the field of nanotechnology and biotechnology: tailored surface modification and encapsulation mainly by the Layer-by-Layer (LbL) technology platform; bead-based microsensors for bioanalysis; and fluorescent polymers and monodisperse nanoparticles, microparticles, microbubbles. The company seeks partners interested in applying or co-developing those technologies (e.g. in pharmaceuticals) via license, research cooperation or manufacturing agreement.

Creation Date	07 November 2018
Last Update	20 November 2018
Expiration Date	21 November 2019
Reference	TODE20181107002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1803504f-cfbc-4277-bc31-875973714ec1

Details

Description

The German SME is active in the intersection of nanotechnology and biotechnology and addresses three challenges:

(1) Surface modification, surface functionalization and encapsulation mainly using the Layer-by-Layer (LbL) coating platform: Controlling surface properties of planar, colloidal, porous or amorphous surfaces is essential in various applications such as pharmaceutical research, food industry, industrial coatings, hi-tech filters and electronics. Bulk coating technologies are either too hard / expensive to apply or they present environmental or technical hurdles e.g. the coatings are too thick. An ideal solution would be to create nanometer thick coatings in an environment-friendly and cost-efficient way without compromise on fine-controlling of surface properties.

Company's LbL platform can create well-controlled nanoscale layers of polyelectrolytes, biomolecules and nanoparticles at most surfaces independent of their size, porosity and shape.

This LbL film is used to fine-tune surface properties such as charge, hydrophobicity, elasticity, roughness, bio-reactivity, etc. and can combine functional materials such as drugs, biomolecules, imaging tracer molecules or nanoparticles with natural or engineered surfaces. The target surface to be modified can be colloidal particles, channels of microfluidic devices, square meter sized plates and in principle any charged surface. Furthermore, LbL technology can be used to produce polymer based hollow capsules which are tunable drug delivery vehicles as they allow a pH, temperature or light triggered drug release.

(2) Tailored production of fluorescent polymers (polyelectrolytes), nanoparticles, microparticles and microbubbles is company's second activity area. Tracking, sorting or imaging thin polymer coatings or particles is possible by integrating fluorescent dyes into these materials. This integration process is, however, not straightforward and requires well-established production and characterization facilities. Even then, it is difficult to find the ideal fluorescent materials in the market. The company optimized fluorescent labeling process for various dyes and materials throughout years of research and offers their expertise to potential partners for tailored applications.

(3) Bioanalysis (antibody-antigen interactions, etc.) and determination of pH, temperature, oxygen, chloride in micron-scale spaces such as in cell cultures, organ-on-a-chip and microfluidic units are complicated, expensive and in some cases impossible if electronic sensors are to be used. In order to address this challenge, the German SME has developed unique microparticle (bead) based microsensors that work with optical principles such as fluorescence or whispering gallery modes. Scientists at the company would work with partners to realize real-time measurements in cell cultures, microfluidics, and even inside large cells with help of most commonly used fluorescent microscopes.

Cooperation partners may use all three technologies on the basis of a license agreement or they can jointly develop new surfaces, materials and microsensors on the basis of a research cooperation agreement. The SME also offers the opportunity of tailored development of similar technologies on the basis of a research cooperation or manufacturing agreement.

Advantages and Innovations

By means of of nanometer thick, Layer-by-Layer (LbL) deposited polymer or particle films, it is possible to tailor the physical properties of almost all planar or colloidal surfaces of any size. Controllable surface properties include hydrophilicity, hydrophobicity, roughness, surface charge, permeability, bio-reactivity and more. A unique advantage of these coatings is that some surface properties such as permeability can be reversibly adjusted via physical triggers such as pH, temperature and light, enabling smart, target-specific drug delivery capsules, high-performance sensors or filtration materials as well as innovative personal care and consumer goods. Apart from the LbL technology, the SME's unique microsensors can analyze biologics and determine pH, temperature, oxygen, chloride in micron-scale spaces e.g. microfluidics, cell cultures and even inside large cells without complex electronics.

Stage of Development

Already on the market

IPR Status

Patent(s) applied for but not yet granted, Patents granted, Granted patent or patent application essential

Comment Regarding IPR status

The company has patent families (applied or granted) on nanocoatings, micro-encapsulation, particle production and label-free bioanalysis. Therefore the IPR status depends on the field of

the co-development. Most patents are valid in Canada, Germany, European Union, Japan and the US except for the patent on bioanalysis, which is filed only in Germany.

Profile Origin

Other

Keywords

Technology

05004001	Filtration and Membrane Processes
05005	Micro- and Nanotechnology
06004	Micro- and Nanotechnology related to Biological sciences
06006006	Biological Nanomaterials
09001009	Sensor Technology related to measurements

Market

04017	Micro- and Nanotechnology related to Biological sciences
05003005	Drug delivery and other equipment
05007002	Pharmaceuticals/fine chemicals
05008002	Food and feed ingredients

NACE

M.72.1.1	Research and experimental development on biotechnology
M.72.1.9	Other research and experimental development on natural sciences and engineering

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Nano- and Microtechnologies

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

Turkish
English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

The company is in search of industrial and academic partners of any background who would like to co-develop or apply the LbL platform or microsensors in the framework of a research cooperation agreement (joint research or contract research), a license agreement or a manufacturing agreement. Possible application areas include pharmaceuticals (e. g. smart drug-delivery and drug-release), biotechnology, food, filtration technology, personal and home care, cosmetics, sensors and electronics. Development schemes are organized around a feasibility study and further research, which are detailed by clearly defined milestones.

Type of Partnership Considered

License agreement
Manufacturing agreement
Research cooperation agreement

Technology Offer

Cost-effective encapsulation of active agents or drugs to be released against pollution, corrosion, or medical condition.

Summary

An innovative process for the synthesis of Layered Double Hydroxide (LDH) is ready to be transferred. Its simple and energy-saving protocol can customize LDH which includes active agents to be released for pollutant extraction, corrosion inhibition, or drug delivery. A French Technology Transfer Office (TTO) is looking for a licensing agreement or a technical cooperation agreement with companies dealing with polluted site clean-up products, anti-corrosion coatings, or drugs encapsulation.

Creation Date	22 November 2018
Last Update	23 November 2018
Expiration Date	24 November 2019
Reference	TOFR20181121001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/190f1833-9ff3-42ee-823e-4c88b9a2be1d

Details

Description

A new process for the synthesis of Layered Double Hydroxide (LDH) has been designed as a cost-saving and efficient encapsulation of active agents. Moreover, it allows to customize materials or chemical preparations to be released against pollution, corrosion, or medical condition.

It has been set up and patented by a French research team which is represented by a Technology Transfer Office (TTO) for its industrial partnership and industrial property management.

Market challenges :

LDHs have a broad range of applications in catalysis, electrochemistry, biomedical and environmental sciences. In particular, LDHs can be used for anion exchange and anion extraction processes and as a controlled release drug or phytochemicals delivery systems. Current LDH synthesis method requires a complex protocol and high energetic cost. In addition, they have a limited range of applications.

State of the art :

LDHs are widely used as acidity regulators. Moreover, they have got interesting properties such as a large specific surface area, which is very useful for heterogenous catalysis. As an example,

it has been tested for biodiesel synthesis. Until now, the only LDH available on the market is Mg-Al carbonate hydrotalcite.

There are other promising use cases for LDHs such as pollutant capture or drug delivery. Nevertheless, there is no simple, efficient and cheap method to prepare customized LDHs dedicated to those applications. Especially, there is a strong need for a cost-effective method of anion extraction from a medium (e.g. to depollute or recycle a substance).

Proposed technology :

The patented technology consists in a new process for exchanging interlayer anions of LDH with other anions whose affinity for the LDH is lower than the one of the initial interlayer anions. This method allows the preparation of customized LDH for extracting anions from a liquid medium (with a following step to regenerate the LDH).

As compared to the synthesis of Mg-Al carbonate hydrotalcite which is the only one available on the market, the patented process is efficient and cost-effective for the extraction of any metal or any pollutant in liquid medium. It can also be applied to drug controlled release for human or vegetal health treatment.

Requested partner :

Manufacturers or end-user companies dealing with pollutant capture, corrosion inhibition, or even drug delivery are requested for either a licensing agreement, or a technical cooperation agreement on a specific usecase.

Keywords :

Layered Double Hydroxide, aqueous solution metal extraction, recycling, depollution, encapsulation, drug vectorisation.

Advantages and Innovations

The innovative encapsulation process can be implemented in a continuous way, and can use as a starting point any LDH, including the commercially available Mg-Al carbonate hydrotalcite.

The proposed technology allows an easy access to LDHs with various types of interlayer anions e.g. drug, biomolecule, catalyst, anti-corrosive agent, depending on the application considered :

- Environment : depollution, recycling, extraction in liquid medium of critical and strategic metals from electronic waste,
- Paint industries : encapsulation of anionic active substance in paints as corrosion inhibitor,
- Pharmaceutical industries : encapsulation of drugs e.g. ibuprofen,
- Phytosanitary industries : encapsulation of herbicides e.g. picloram.

Stage of Development

Available for demonstration

IPR Status

Patents granted

Comment Regarding IPR status

World Patent pending.

Profile Origin

Private (in-house) research

Keywords

Technology

05004002	Extraction
05004003	Adsorption
05004006	Other Processes
05005	Micro- and Nanotechnology

Market

05003005	Drug delivery and other equipment
05009004	Plant health
08004002	Chemical and solid material recycling
08004004	Other pollution and recycling related

NACE

M.72.1.9	Other research and experimental development on natural sciences and engineering
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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Bio Chem Tech

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

2012

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The French Technology Transfer Office (TTO) is acting on behalf many research labs from several major engineering schools within the Paris region.

Languages Spoken

English

French

Client Country

France

Partner Sought

Type and Role of Partner Sought

The requested partner may be a company interested in the controlled release of active agents to be used for pollutant capture, corrosion inhibition, or even sustained drug release.
Expected outcomes are either :

- a licensing agreement prior to an industrial development of an innovative product based on the proposed technology, or

- a technical cooperation agreement in order to set up a customized LDH for a specific use case in any of the following application fields : pollution, corrosion, drug vectorisation for health or plant cultivation.

Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

License agreement

Technical cooperation agreement

Technology Offer

Innovative fragile crystalline material wafer scribing/dicing technology and optical engine offered

Summary

A Lithuanian SME, specializing in hard material laser processing technology development, is offering the developed fragile crystalline material (quartz, lithium niobate, etc.) wafer scribing/dicing technology and optical engine for optical and crystalline material and their products manufacturers. The company is looking for partners working under commercial agreement with technical support or a joint venture agreement.

Creation Date	08 October 2018
Last Update	24 November 2018
Expiration Date	25 November 2019
Reference	TOLT20180129001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/b37bf571-e73d-4706-ba1d-97c130225c76

Details

Description

Lithuanian advanced technology company which provides solutions for laser micromachining was established in 2012. The company has been closely co-operating with globally known companies working in the light conversion and workshop of photonics field as well as actively participating in preparation of new talents for this field.

The tool offered by the company is a state of the art optical engine for fragile crystalline material wafer scribing, designed to suit the needs of the optical and crystalline material and their products manufacturers or electronics devices industry that uses these materials. This technology allows fast single or multiple pass up to 0,5 mm thick substrate or wafer scribing and dicing with high-quality right angle cut profiles, allowing for easy breaking with no peeling or chipping of the material. The optical engines are compact (~400 x 410 x 700 mm) and with a small footprint. Single, double or multiple beam focus as well as beam focus depth inside the wafer is adjustable. Beam power, pulse duration and repetition adjustments are possible. Additional functions can be added for engines under request from the partners.

Company is looking for a partnership opportunities for their technology. It is envisaged that in the case of commercial agreement with technical assistance this technology could be sold either as a service to manufacturer, where main services can be provided from existing location. The joint venture agreement is aimed at expanding their working field and delivering technology through active partnerships within different regions. Company is open for offers to build additional structures in different locations to suit the market needs and help partners to develop

partnership.

Advantages and Innovations

This technology is meant for solving problems faced in current hard and fragile material dicing technologies:

- Processing speed of this technology is 300 mm/sec and above;
- This technology requires less energy and material consumption to achieve desired results;
- This technology provides high-quality right angle cuts allowing for easy breaking of the wafers without chipping or peeling of the material.

This technology solves problems like slow processing velocity, wide street necessity, large debris and chipping of the process, material overheating issues and high running costs that are problems currently faced by using other technologies.

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

Optical engine is ready for commercialization.

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Optical engine is ready for commercialization.

Profile Origin

Other

Keywords

Technology

01002007	Nanotechnologies related to electronics & microelectronics
01002012	Semiconductors
02002004	Erosion, Removal (spark erosion, flame cutting, laser, ..)
05003002	Optics

Market

03005	Laser Related
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NACE

C.26.1	Manufacture of electronic components and boards
M.72.1.9	Other research and experimental development on natural sciences and engineering
M.74.9.0	Other professional, scientific and technical activities n.e.c.

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Nano- and Microtechnologies

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2012

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The CEO of the company is a co-author of 8 patents granted to previous employer in Japan.

Languages Spoken

English
Russian
Lithuanian

Client Country

Lithuania

Partner Sought

Type and Role of Partner Sought

The partners that could take advantage of commercial agreements with technical assistance should be optical and crystalline material and their products manufacturers or integrators that require innovative solutions for scribing and dicing of these materials.

The partners that would be interested in joint venture and research cooperation agreements should be private companies in the field of semiconductor, optical materials industry and electronics.

Type and Size of Partner Sought

SME 11-50, University, R&D Institution, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Commercial agreement with technical assistance
Joint venture agreement

Research & Development Request

H2020 DT-NMBP-03-2019: Manufacturers of spun-laid or dry-laid non-wovens sought for testing and introducing nano(particle) enabled surface functions such as fire retardancy, hydrophobicity, anti-microbial etc.

Summary

A network of three Research and Technology Organisations (RTO) and several companies are dealing with (nano)-particles, coatings, foils, textiles and non-wovens, their treatment and upscaling of innovative solutions close to production level. They are looking now for manufacturers (preferably SMEs) of spun-laid or dry-laid non-wovens interested in testing and introducing nano(particle) enabled surface functions to join their consortium for a proposal for the call H2020 DT-NMBP-03-2019.

Creation Date	30 November 2018
Last Update	11 December 2018
Expiration Date	11 January 2019
Reference	RDDE20181130001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/5e835656-45c2-4ea5-b716-1fe9cb8dddee

Details

Description

The network consisting of three European RTOs (Finland, Germany, France) and several companies is dealing with (nano)-particles, coatings, foils, textiles and non-wovens, their treatment and upscaling of innovative solutions close to production level. Further, some network partners are addressing various issues related to market introduction such as quality control, regulations, LCA, financing etc. The goal of the R&D project is to upscale and verify nano-enabled surface treatments in respective industrial environment. The solutions are needed due to exponentially growing environmental pollution problems (e.g. plastics in the seas) and growing resistance against antibiotics.

The large-scale pilot facilities of the network partners make first product demos possible without any investments in the participating companies. The project will use an open access pilot-line to produce nanomaterials and various SME manufacturing capabilities including novel technologies for providing customizable up-scalable nanoparticle (NP) dispersions.

The proposal will be addressed to the call H2020-NMBP-TO-IND-2018-2020 with the name "Open Innovation Test Beds for nano-enabled surfaces and membranes (IA)".

The network is looking for manufacturers (preferably SMEs) of spun-laid or dry-laid non-wovens interested in testing and introducing nano(particle) enabled surface functions such as fire retardancy, hydrophobicity, anti-microbial etc. The participating companies additionally have the benefit of receiving funding for e.g. tests at customers, marketing, addressing various issues related to market introduction such as quality control, regulations and LCA.

Funding scheme: Innovation Action
Deadline-Model: Two-stage submission
Deadline for the 1st stage: 22.01.2019
Deadline for the 2nd stage: 03.09.2019

Deadline for Expression of Interests: 25.12.2019
Anticipated duration of the project: 3 years (2020-2022)

Advantages and Innovations

The advantage of this approach is that we focus less on research but rather on market-oriented upscaling/ implementation of such innovative technologies and have the entire "market preparation/ introduction" service network including financial support involved.

Technical Specification or Expertise Sought

Manufacturers (preferably SMEs) of spun-laid or dry-laid non-wovens

Stage of Development

Proposal under development

Comments Regarding Stage of Development

Most of the available materials and processing (coating) technologies are available at high (TRL 4-5) levels. The project proposal is already quite advanced. Final target is TRL 7.

Keywords

Technology

02005004 Packaging for materials
02007024 Nanomaterials

Market

08001006 Processes for working with plastics
08001008 Membranes and membrane-based products
08005 Other Industrial Products (not elsewhere classified)

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Aeronautics, Space and Dual-Use Technologies
Automotive, Transport and Logistics
Materials
Nano- and Microtechnologies
Sustainable Construction
Textile and Fashion

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Within the test-bed, the project will help industrial partners to design and test new materials and up-scale technologies for novel packaging and non-woven solutions. Therefore they are looking

for industrial partners (preferable SMEs) of Manufacturers of spun-laid or dry-laid nonwovens (for recyclable and/or biodegradable novel fibre based packages and film solutions out of non-woven materials).

The partners are sought for nonwoven demonstrations. They should test and introduce nano(particle) enabled surface functions such as fire retardancy, hydrophobicity, anti-microbial etc.

Type and Size of Partner Sought

SME 11-50,251-500,SME 51-250,>500

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

Nanotechnologies, Advanced materials, Advanced manufacturing and processing, Biotechnology

Call title and identifier

H2020 DT-NMBP-03-2019: Open Innovation Test Beds for nano-enabled surfaces and membranes (IA)

Coordinator Required

No

Deadline for EOI

11 Jan 2019

Deadline of the Call

22 Jan 2019

Project Duration

144 week(s)

Weblink to the Call

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/dt-nmbp-03-2019.html>



2.

***PRODUCCIÓN
INDUSTRIAL***

Technology Offer

French SME specialized in precision cleaning for high-tech industries is looking for technical partners

Summary

A French SME is offering advanced cleaning processes addressed to critical parts for semiconductor, medical, pharmaceutical and industry markets. The company's expertise is the decontamination of sensitive devices with high cleanliness requirements by setting up innovative processes and control means for a best cleaning efficacy. The company is seeking enterprises or laboratories working in the area of critical contamination management for technical cooperation agreements.

Creation Date	17 May 2018
Last Update	20 November 2018
Expiration Date	21 November 2019
Reference	TOFR20180502001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/3674d5d1-da27-4216-9fcb-6749b830719b

Details

Description

A French SME is offering advanced cleaning processes for sensitive surfaces, adapted to the type of contaminant to remove. Examples of specific equipments for precision cleaning and surface treatments are:

- aqueous processes (immersion or spray) by using a high purified water quality, combined with liquid ultrasonic cavitation
- atmospheric ultrasonics (airborne ultrasonic cavitation, coupled with particle suction by vacuum)
- atmospheric plasma (generation of plasmic sprays adapted to molecular and microbial contaminations removal)
- cryogenic spray (projection of mini crystals of CO₂, combining mechanical action and solubilization of various pollutants)
- laser (generation of laser beam for particulate and molecular removal)
- supercritical CO₂ (use of supercritical fluid for molecular extraction/separation and sterilization)

- dynamic desorption (molecular outgassing of devices under heating and vacuum conditions)

The company, with more than 20 years of experience, has an extensive expertise in measurements and advanced characterization of contamination, adapted to the part and type of pollutant to detect (particles, ions, metals, organics...).

The company is seeking technical collaborations or partnerships with enterprises or laboratories working in specific area of critical contamination management. Partners are expected to perform assessments and evaluations of cleaning processes performance, in order to optimize part cleanliness and contamination control.

Advantages and Innovations

- removal of particles down to 0.2 microns, as well as molecular and microbial contaminations
- full traceability of products and processes
- controlled environment for assembly and packaging in clean room, in order to avoid any cross-contamination
- benefit from a multisectorial vision of the contamination control dedicated to the high-tech industries (life sciences, pharmaceutical, microelectronics, space, aeronautics)
- mutualization of innovative means (decontamination and characterization) in order to address a targeted service, optimized by the costs
- set up of specific processes, prototypes or methodologies dedicated to the type of part to be cleaned

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

Most of the identified processes already exist, but generally for one specific application. In the framework of the project, the main purpose will be to develop and adapt those various cleaning techniques to the sensitive surfaces that require stringent specifications, in order to address the highest cleanliness level.

IPR Status

Secret Know-how, Other

Profile Origin

Private (in-house) research

Keywords

Technology

02002001	Cleaning (sandblasting, brushing)
02002015	Surface treatment (painting, galvano, polishing, CVD, ..)
02003006	Prototypes, trials and pilot schemes
03001001	Cleaning Technology

09001002 Analyses / Test Facilities and Methods

Market

01005004 Microwave and satellite components
03004001 Semiconductor fabrication equipment and wafer products
05003003 Surgical implants
05007001 Disposable products
08006 Industrial Services

NACE

N.81.2.9 Other cleaning activities

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Materials

Client

Type and Size of Organisation Behind the Profile

Industry SME 50-249

Ref: TOFR20180502001

Year Established

2002

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Experience Comments

Certification standards: ISO 9001:2008 – ISO13485:2012 – FDA

Languages Spoken

English

French

Client Country

France

Partner Sought

Type and Role of Partner Sought

The company is looking for partners (enterprises or laboratories) working in specific area of critical contamination management.

Partnership mainly consists in performing assessments and evaluate cleaning processes performance to optimize cleanliness and contamination control.

- Type of partner sought :

Key end-users, industrial companies, R&D institutes

- Specific area of activity of the partner :

Critical contamination management

- Task to be performed by the partner sought :

Tests and evaluations of cleaning processes performance

Type and Size of Partner Sought

SME 11-50,R&D Institution,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement

Technology Offer

A Finnish university is looking for licensing partners for their multilayer coated paper substrate for printed electronics

Summary

A Finnish university is looking for licensees like specialty paper or printed electronics manufacturers for a multilayer coated paper substrate suitable for printed functional devices. The substrate can be recycled, and the raw materials used are widely available bulk chemicals for paper production and coating. The paper can be produced by roll-to-roll manufacturing and its properties can be readily tuned to suit the selected printing application and to achieve a desired function.

Creation Date	30 November 2018
Last Update	03 December 2018
Expiration Date	04 December 2019
Reference	TOFI20181129001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a580f6bd-bb1c-4da0-8aea-e30ea7b9df09

Details

Description

A Finnish university has developed a multilayer coated paper substrate for printed functional devices.

The invention is based on ca. 10 years of intense research activities, and the research group has collaborated tightly with industrial partners during its development. The paper substrate has been produced in pilot trials in industrial paper-making facilities and successfully tested in several proof-of-concept applications including for example a low-voltage organic transistor, an electrochromic pixel, oxygen sensor, hydrogen sulphide sensor and an ion-selective electrode.

The paper substrate comprises of a multilayer structure including a top coating, barrier layer, smoothing layer, pre-coating and basepaper. The substrate can be recycled, and the paper is therefore suited for "one-time" or "throwaway" applications. The raw materials used are widely available bulk chemicals for paper production and coating. The concept enables the use in a wide range of printing and coating methods. The surface properties of the substrate can be readily tuned or new ones added to achieve a desired function.

The versatile applicability of the developed paper substrate has been demonstrated with several proof-of-concept devices including transistors, ion-selective electrodes and chemical sensors.

The invention has granted patents in China and in nine European countries (GB, FR, DE, CH, FI, NL, SE, AT, BE).

Potential commercial application areas include for example bio- and chemical sensors, microfluidics, smart packaging, logistics management and tracking, single use electronic circuits, devices and displays.

The university is looking for licensees interested in commercial exploitation of the technology and acquiring the IP rights for the technology. Potential partners could be for example specialty paper manufacturers, or manufacturers of printed electronics with possibilities to outsource the production to a suitable paper production facility.

Advantages and Innovations

The advantages of the paper substrate with regard to its manufacturing include the possibility to produce it from widely available paper production and printing chemicals by roll-to-roll manufacturing. The properties of the substrate are advantageous in comparison to the available solutions due to its versatile functionality, its excellent barrier properties against liquids and its flexibility. The substrate is also recyclable, and it can also be considered to be an alternative to plastic substrates for printed electronics

Stage of Development

Field tested/evaluated

IPR Status

Patents granted

Profile Origin

Other

Keywords

Technology

01002010	Printed circuits and integrated circuits
02002002	Coatings
02007013	Paper technology
03009001	Flexography

Market

08001009	Speciality/performance materials: producers and fabricators
08001015	Other speciality materials
08005	Other Industrial Products (not elsewhere classified)
09004007	Printing and binding

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Swedish
Finnish

Client Country

Finland

Partner Sought

Type and Role of Partner Sought

The university is looking for companies interested in commercial exploitation of the technology and acquiring the IP rights of the granted patents.

Potential partners could be for example:

Ref: TOFI20181129001

- specialty paper manufacturers
- manufacturers of printed electronics with possibilities to outsource the production to a suitable paper production facility.
- companies operating in bio- and chemical sensors, microfluidics, smart packaging, logistics management and tracking, single use electronic circuits, devices and displays

Type of Partnership Considered

License agreement

Technology Offer

Dutch developer and manufacturer of metal sheet machine with focus on roll forming is looking for cooperation based on a commercial agreement with technical assistance

Summary

A small Dutch company is specialised in the development and optimising of customised metal sheet roll forming lines for making products from coil to end product. Also mobile machines for production on the spot are being developed. The company is interested in technical and commercial cooperation with companies who are looking for application of roll forming techniques in their products. Cooperation will be based on a commercial agreement with technical assistance.

Creation Date	06 November 2018
Last Update	23 November 2018
Expiration Date	24 November 2019
Reference	TONL20181025001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0f0784bd-69ab-4c2a-a9e5-ef63c73cf56d

Details

Description

The company is supplier of sheet metal working machines, developer of sheet metal production lines and also of mobile roll formers.

The company is specialized in developing complete customized roll forming lines for open and closed profiles. These production lines include all necessary techniques ; feeding, de-coiling, stretching, bending and cutting. Also related techniques like rotating punching, in line servo punching and in line bending are being applied.

A long term specialty is the development of different mobile solutions for production on the spot, like gutters in greenhouses. Mobile roll forming machinery is unique all over the world.

The company also advises in current production, in terms of method, costs and quality. It is very innovative in finding solutions for all kinds of technical problems in the field of roll forming.

Typical products are machinery for producing roof and wall plating, air channels, cable ducts, all kinds of profiles for furniture and horticultural applications, casings etc.

The company is interested in technical and commercial cooperation with companies who are looking for application of roll forming technics in their products. Cooperation can be arranged in the frame of a commercial agreement with technical assistance.

Advantages and Innovations

Roll forming is one of the fastest and cheapest techniques for manufacturing serial products based on sheet metal.

Mobile solutions, for producing gutters for instance, are very efficient in several circumstances: every possible length can be produced, jointing profiles are superfluous.

Several materials can be processed: steel, stainless steel, aluminium, coated steel, etc.

Producing different profiles on one machine is possible by changing the forming tools.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Keywords

Technology

02002005

Forming (rolling, forging, pressing, drawing)

02007010

Metals and Alloys

Market

08002007

Other industrial automation

08003001

Machine tools, other metal working equipment (excl. numeric control)

NACE

C.25.5.0

Forging, pressing, stamping and roll-forming of metal; powder metallurgy

C.28.4.1

Manufacture of metal forming machinery

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Materials

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2002

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Dutch
German

Client Country

Netherlands

Partner Sought

Type and Role of Partner Sought

The company is looking for manufacturing companies who are interested in application of roll forming technics in their products .

Type of Partnership Considered

Commercial agreement with technical assistance

Technology Offer

Innovative fragile crystalline material wafer scribing/dicing technology and optical engine offered

Summary

A Lithuanian SME, specializing in hard material laser processing technology development, is offering the developed fragile crystalline material (quartz, lithium niobate, etc.) wafer scribing/dicing technology and optical engine for optical and crystalline material and their products manufacturers. The company is looking for partners working under commercial agreement with technical support or a joint venture agreement.

Creation Date	08 October 2018
Last Update	24 November 2018
Expiration Date	25 November 2019
Reference	TOLT20180129001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/b37bf571-e73d-4706-ba1d-97c130225c76

Details

Description

Lithuanian advanced technology company which provides solutions for laser micromachining was established in 2012. The company has been closely co-operating with globally known companies working in the light conversion and workshop of photonics field as well as actively participating in preparation of new talents for this field.

The tool offered by the company is a state of the art optical engine for fragile crystalline material wafer scribing, designed to suit the needs of the optical and crystalline material and their products manufacturers or electronics devices industry that uses these materials. This technology allows fast single or multiple pass up to 0,5 mm thick substrate or wafer scribing and dicing with high-quality right angle cut profiles, allowing for easy breaking with no peeling or chipping of the material. The optical engines are compact (~400 x 410 x 700 mm) and with a small footprint. Single, double or multiple beam focus as well as beam focus depth inside the wafer is adjustable. Beam power, pulse duration and repetition adjustments are possible. Additional functions can be added for engines under request from the partners.

Company is looking for a partnership opportunities for their technology. It is envisaged that in the case of commercial agreement with technical assistance this technology could be sold either as a service to manufacturer, where main services can be provided from existing location. The joint venture agreement is aimed at expanding their working field and delivering technology through active partnerships within different regions. Company is open for offers to build additional structures in different locations to suit the market needs and help partners to develop

partnership.

Advantages and Innovations

This technology is meant for solving problems faced in current hard and fragile material dicing technologies:

- Processing speed of this technology is 300 mm/sec and above;
- This technology requires less energy and material consumption to achieve desired results;
- This technology provides high-quality right angle cuts allowing for easy breaking of the wafers without chipping or peeling of the material.

This technology solves problems like slow processing velocity, wide street necessity, large debris and chipping of the process, material overheating issues and high running costs that are problems currently faced by using other technologies.

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

Optical engine is ready for commercialization.

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Optical engine is ready for commercialization.

Profile Origin

Other

Keywords

Technology

01002007	Nanotechnologies related to electronics & microelectronics
01002012	Semiconductors
02002004	Erosion, Removal (spark erosion, flame cutting, laser, ..)
05003002	Optics

Market

03005	Laser Related
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NACE

C.26.1	Manufacture of electronic components and boards
M.72.1.9	Other research and experimental development on natural sciences and engineering
M.74.9.0	Other professional, scientific and technical activities n.e.c.

Network Contact

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Nano- and Microtechnologies

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2012

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The CEO of the company is a co-author of 8 patents granted to previous employer in Japan.

Languages Spoken

English

Russian

Lithuanian

Client Country

Lithuania

Partner Sought

Type and Role of Partner Sought

The partners that could take advantage of commercial agreements with technical assistance should be optical and crystalline material and their products manufacturers or integrators that require innovative solutions for scribing and dicing of these materials.

The partners that would be interested in joint venture and research cooperation agreements should be private companies in the field of semiconductor, optical materials industry and electronics.

Type and Size of Partner Sought

SME 11-50, University, R&D Institution, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Commercial agreement with technical assistance
Joint venture agreement

Technology Offer

Nanoceramic coating for light alloys, superior to anodising and plasma electrolytic oxidation (PEO)

Summary

A UK company has introduced novel coating for high hardness and low friction, superior to anodising or plasma electrolytic oxidation (PEO). Fast moving parts in various machinery and engines have a longer life, whilst being easier to produce. Manufacturers of machinery in various sectors such as textiles, packaging, aerospace, food, motor sport, luxury goods, are sought for manufacturing and commercial agreements with technical assistance, and licensing.

Creation Date	21 November 2018
Last Update	30 November 2018
Expiration Date	01 December 2019
Reference	TOUK20181121001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/3135fb25-709a-4437-9fca-a1beb366ff78

Details

Description

A UK innovative company has been commercialising a new coating technique for about ten years. Their patented technology focuses on nanoceramic coating on metals and functionalisation of ceramic surfaces.

Nanoceramic coatings are particularly useful in fast moving parts in environments with high wear or elevated temperature. These have to be wear resistant (sometimes corrosion resistant) and have low friction. The UK company's technology has successfully been implemented in machinery for weaving and packaging in parts such as shuttles, rollers, discs, guides. Also, marine and motor sport companies have started using it.

There are technologies on the market for wear resistance and low friction such as anodising and plasma electrolytic oxidation (PEO). There is always room for improvement. The patented electrochemical treatment is characterised by a denser structure with no pores and high homogeneity. It also performs better on complex shapes. The resulting hardness (twice that of chrome) and low roughness allow for less polishing needed. Also, no pre-treatment is needed in this environmentally friendly process.

In terms of materials coated, aluminium is the most common, as a substitute for steel. Others include Mg, Nb, various alloys, and early results have been demonstrated with Ti and Zr (biocompatible coatings for medical and dental implants).

In addition to manufacturers of packaging and textile machinery, the UK company seeks

manufacturing agreements in emergent fields. These may include aerospace, various titanium products, transport and engine parts (Al pistons, turbochargers), luxury items, but also food and medical industry. The UK company would coat the components in their own plant. In case of large volume demand, it will make economic sense to shift the manufacturing to the partners. The UK company are open to licensing, to transfer the know-how to the partner company. During the construction of new plant, a commercial agreement with technical assistance would also be necessary in addition to the license agreement. The UK company would have to build parts of the plant as they are rather specific.

Advantages and Innovations

Compared to anodising and plasma electrolytic oxidation(PEO), the coating is more homogenous and pore-free, and has lower surface roughness. Also, it conditions no pre-treatment.

The advantages: environmental benefits aside, the technology produces harder, smoother and longer lasting components with less effort.

Stage of Development

Already on the market

IPR Status

Patents granted

Comment Regarding IPR status

Patented in UK, EU, USA, China Japan and Taiwan.

Profile Origin

National or Regional R&D programme

Keywords

Technology

02002015 Surface treatment (painting, galvano, polishing, CVD, ..)

Market

05003003 Surgical implants
 08001009 Speciality/performance materials: producers and fabricators
 08001012 Speciality metals (including processes for working with metals)
 08003005 Other industrial machinery for textile, paper & other industries
 09001005 Motor vehicles, transportation equipment and parts

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

United Kingdom

Partner Sought

Type and Role of Partner Sought

Type of partner sought: industry

Specific area of partner sought: manufacturers of wear-resistant parts in sectors such as textile and packaging machinery, automotive, aerospace, food machinery, medical implants, luxury items.

Role of partner sought: to specify manufactured parts in the UK; in the case of larger volumes to implement the technology under license and commission plant under a commercial agreement with technical assistance. The UK company will assist with the individual protocols.

Type and Size of Partner Sought

SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement

Manufacturing agreement

Ref: TOUK20181121001

Commercial agreement with technical assistance

Attachments



Pic. 2



Pic. 1



Pic. 3

Technology Offer

A silent and compact micropump with ultra-smooth flow and rapid response for Medical, Life Science and Environmental applications; ranging from wearable medical devices, Point of care (POC) diagnostic systems and environmental sampling

Summary

A UK start-up works with entrepreneurial companies, both large and small, to bring disruptive new products to market. Their award-winning micropump platform and further development support has enabled new ambitious projects in the medical field. They also look for companies in life sciences and environmental monitoring for licensing, commercial agreement with technical assistance, technical co-operation.

Creation Date	12 November 2018
Last Update	20 November 2018
Expiration Date	21 November 2019
Reference	TOUK20181112001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/cfedb968-ca98-42ec-a60b-6bf0cb534808

Details

Description

The company offers a high-performance micropump which makes use of advances in the field of non-linear acoustics. In contrast to conventional air pumping mechanisms (such as diaphragm and piston pumps), disc pump does not rely on the bulk compression of air within a cavity. Instead disc pump generates a high amplitude, high frequency acoustic standing wave within a specially designed acoustic cavity. A patented ultra-fast valve technology rectifies this standing wave to deliver pumped flow with a unique set of attributes:

- Silent operation
- Small size and light weight; just 5g (1/5 oz)
- Exceptional pressure and flow
- Ultra-fast (ms) response to set-point changes
- Ultra-smooth flow
- Full control flexibility, infinite turn down ratio

The micro pump platform can be used in a wide range of applications ranging from medical and life sciences, to environmental and defence.

In the Medical sector, devices that were once heavy and fixed are now small and portable – and increasingly wearable. With its combination of performance, silent operation and size, this disc pump is enabling manufacturers to respond to this trend with smaller, lighter, quieter products.

Applications include:

- Blood pressure monitoring • Wound care
- Anaesthesia gas monitoring • Portable suction
- Capnography • Drug delivery
- Sleep therapy • Point-of-care (POC) diagnostics
- Intermittent compression therapy • Therapeutic surfaces
- MRI compatible instruments • Vacuum prosthetics
- Breathomics • Digital thoracic drainage

Also, with the demand for ever more personalised care, a growing proportion of diagnostic testing in the life sciences sector is moving out of centralised labs into the doctor's surgery – and increasingly, the home. This is fuelling innovation in miniaturised, rapid-readout Point of Care (POC) technology. To meet the evolving demands, today's systems place increasing importance on reduced size, weight and noise, whilst remaining uncompromising on performance. The micropump technology is enabling life science leaders to push the boundaries of their microfluidic and liquid handling systems, in pursuit of new and radical life-saving medical and diagnostic devices; these in turn deliver better patient outcomes and improved quality-of-life. The ultra-smooth flow coupled with the precise and rapid control means that the pump is ideal for pressure driven flow control in microfluidic applications like droplet generation and laminar flow in POC diagnostic systems. Applications include:

- Medical Diagnostics • Immunology testing
- Droplet microfluidics • Haematology – Blood gas analysis
- HTS – High throughput screening • Clinical chemistry analysis
- Proteomics and Genomics • Point-of-care (POC) diagnostics
- Plant science • Molecular diagnostics
- Biotechnology and Biomedical engineering • Titration calorimeter
- Liquid level sensing • Animal science and veterinary testing

In the environmental sector, the disc pump is well placed to enable the development of systems, from gas samplers and detectors, to laboratory analysers and particle counters. The ultra-smooth flow helps to improve the signal to noise (SNR) ration that helps to improve sensitivity and the dynamic range of the pump allows for a near infinite turn down ratio and highly accurate flow control. Applications include:

- Ion mobility spectroscopy • Particle counting
- PID sensing • Workplace monitoring
- Side stream humidity measurement • Environmental monitoring
- VOC analysis • Leak detection
- Water sampling • Portable and wearable

The UK company is seeking companies in life sciences, medical and environmental fields, to integrate the micropump into their devices and systems under a commercial agreements with technical assistance. Licensing will be considered. The platform technology can be adapted to specific requirements under technical co-operation.

Advantages and Innovations

The unique attributes of the micropump technology and the company's expertise in many industrial sectors and applications allows for a collaborative approach that will enable prospective customers to be highly innovative and push the boundaries of their product design.

Stage of Development

Field tested/evaluated

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Patent applications filed with a view to extend to most developed countries.

Profile Origin

Private (in-house) research

Keywords

Technology

03003	Apparatus Engineering
05003001	Vibration and Acoustic engineering
05005	Micro- and Nanotechnology
06004	Micro- and Nanotechnology related to Biological sciences

Market

05001002	In-vitro diagnostics
05004003	Laboratory equipment
05004005	Diagnostic equipment
05005016	Environmental Medicine, Social Medicine, Sports Medicine
05007004	Monitoring equipment

Network Contact

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2016

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

United Kingdom

Partner Sought

Type and Role of Partner Sought

Type of partner sought: industry

Specific area of partner sought: developers of medical devices, diagnostic systems and sampling equipment or systems from a variety of sectors.

Role of partner sought: to adapt the technology into their devices under a license or commercial agreement with technical assistance. Jointly, under a technical co-operation, the technology can be modified further to meet specific requirements.

Type and Size of Partner Sought

SME 11-50, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

License agreement

Commercial agreement with technical assistance

Technical cooperation agreement

Attachments



micropump

Technology Offer

Composite bio-compatible material on the basis of titanium alloys and vitreous carbon coating intended for endoprosthesis

Summary

A Bulgarian research institute has developed an innovative composite bio-compatible material on titanium basis with glassy (vitreous) carbon coating. It is intended for production of endoprosthesis due to its biological compatibility and resistance to biochemical corrosion. The researchers are seeking industrial or research partners for technical cooperation or research cooperation agreements.

Creation Date	03 December 2018
Last Update	06 December 2018
Expiration Date	07 December 2019
Reference	TOBG20181122001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/c7f6c955-c932-4790-80f1-b6d445244d79

Details

Description

The Bulgarian research unit conducts R&D in metal science, specialised coatings, heat treatment, casting, crystallisation, structure and properties of metals, alloys and composites and nano-materials, plasticity modelling, destruction of materials, etc. They have excellent experience in international collaboration and project implementation.

Titanium alloys are the basis for the production of endo-prostheses as titanium is a bio-compatible material for the human body. After a stay in the human body it is possible that part of the Al and V present in the titanium alloy can be partially ionized and corrosion and loosening of the bond between the titanium implant and the human bone may occur. Deposition of layer of vitreous (nascent) carbon, which is also proven to be bio compatible, on the titanium matrix neutralises the biochemical corrosion.

The fabrication of the hip joint or other endo-prosthesis can be made by traditional metal working of titanium. On the other hand, additive manufacturing may be used to prepare implant for each individual case. The 3-D printer with titanium powder will follow the shape and the dimensions of the damaged organ to produce an individual implant.

The different use of the implant needs different surface smoothness, e.g. the stem of the hip joint prosthesis is preferred to be more rough for better intergrowth with the bone whilst the femoral head must be polished to decrease the friction with the acetabular shell and

polyethylene insert. The surface roughness is achieved by plasma spraying of titanium particles and the smoothness – by mechanical polishing.

The glassy carbon coating is prepared by applying a solution of heat treated long chain organic substance on the surface of the titanium sample. Then the item is dried and heat treated. In order to improve the adhesion of the vitreous carbon layer the heat treatment was performed at 1350 – 1400 degrees Celsius in inert environment. Titanium carbide was created during this heat treatment which is an intermediary layer between the titanium substrate and the vitreous carbon coating. In order to have better layer this procedure is repeated several times. After the heat treatment only carbon in vitreous (glassy) state remains on the surface. It has amorphous structure and its hardness is that of normal silicate glass (7 by Mohs scale). Since the coating is only carbon it is at least or even more bio-compatible than the titanium and titanium alloys.

The institute is looking for industrial and research partners for technical cooperation agreements and research cooperation agreements in order to further develop the technology and adapt it to the specific needs.

Advantages and Innovations

- The composite material is with improved bio-compatibility and wear resistance compared to titanium only implants.
- The roughness of the surface can be controlled depending on the conditions it will be used in.
- The 3-D printing with titanium powder gives the opportunity to produce an individual implant according to the shape and the dimensions of the damaged organ.
- The glassy carbon coating adheres well to the titanium surface and it can be polished to the desired roughness. It is well tolerated by the adjacent tissues.

Stage of Development

Under development/lab tested

IPR Status

Secret Know-how

Profile Origin

Other

Keywords

Technology

02001001	3D printing
02002002	Coatings
02007005	Composite materials
02007010	Metals and Alloys
06001020	Physiotherapy, Orthopaedic Technology

Market

05003003	Surgical implants
05005015	Orthopaedics

NACE

Ref: TOBG20181122001

M.72.1.9

Other research and experimental development on natural sciences and engineering

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Healthcare
Materials

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1960

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Bulgarian
Russian

Ref: TOBG20181122001

Client Country

Bulgaria

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: the research team is looking for industrial and R&D partners;
- Specific area of activity of the partner: partner sought related to the medical, orthopedy or related sectors; entities working on development and manufacture of composite materials and bio-compatible materials;
- Task to be performed: testing of the prototype, production, marketing or adaptation to specific needs; receiving the necessary know-how from the developer via technical cooperation agreements or research cooperation agreements are considered.

Type and Size of Partner Sought

SME 11-50, R&D Institution, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Technology Offer

An Italian inventor designs an innovative toothbrush for more effective cleaning

Summary

An Italian inventor has designed a new model of toothbrush with an innovative manual mechanism that allows a deeper and more accurate teeth cleaning, even in hard-to-reach areas. He is interested in a commercial agreement with technical assistance or in a manufacturing agreement with companies in the sector of the dental industry.

Creation Date	13 November 2018
Last Update	21 November 2018
Expiration Date	22 November 2019
Reference	TOIT20181113002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/6e18b5d2-9009-45fa-a19c-130bedf6e70c

Details

Description

An Italian inventor has designed a new ergonomic shape of a device for the care of teeth that allows a more accurate cleaning. The invention is patented but there is not yet a prototype. The inventor is looking for manufacturing agreement or a commercial agreement with technical assistance with tooth care devices producers able to implement the invention and to bring it to the market.

These new model of toothbrushes consist in an handle presenting a portion equipped with an array of bristles suitable to allow the teeth brushing. It is likewise known that, to effectively clean the teeth, the toothbrush has to easily reach all the parts of the set of teeth. In particular, it is preferable that the toothbrush operates the brushing of the front and back surface of each tooth, operating with reciprocating motion along a vertical direction. In other words, the movement of the toothbrush must be performed according to the longitudinal axis of the tooth, on its inner and outer surface.

To better satisfy this requirement, various forms of toothbrushes, different from the traditional toothbrushes, have been proposed. Common toothbrushes, which have a fixed conformation, allow a correct brushing action on the outer surface; while in the inner surface the brushing action results to be uncomfortable as well as incorrect.

The aim of the present invention is to overcome the cited drawback by devising a device for the care of teeth which enables to carry out an effective cleaning of all the teeth of the mouth, in particular the portion of teeth facing the inside of the mouth.

This invention claim to provide a device for the care of teeth of simple, practical structural conception, equipped with certainly reliable functioning, of versatile use, and also of relatively economical cost. It could be also be manufactured with eco-friendly materials.

The developed toothbrush can be referred to as "tilting" as the portion provided with bristles can assume different positions with respect to the handle. The articulation mechanism, which allows the brushing movement, is of great constructional and functional simplicity (it could be activated by mouth). The toothbrush is also ergonomic, since it can be indifferently used by right- and left-handed subjects thanks to the specularity of the two positions.

Advantages and Innovations

- The functional parts of the device can easily be made interchangeable;
- the claimed device has the predetermined and limited number of operational positions. This allows using the device more easily in the correct position;
- the device results of simple and sturdy structure in order to have moderate costs, adequate to the requirement of a product of large consumption;
- materials used for the actual realization of the invention, as well as their shapes and sizes, can be various, depending on the requirements (also eco-friendly materials).

Stage of Development

Available for demonstration

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Patent pending

Profile Origin

Private (in-house) research

Keywords

Technology

03001001	Cleaning Technology
06001004	Dentistry / Odontology, Stomatology

Market

05004001	Electromedical and medical equipment
05005017	Dentistry / Odontology, Stomatology
05007007	Other medical/health related (not elsewhere classified)

NACE

Q.86.2.3	Dental practice activities
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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Bio Chem Tech

Client

Type and Size of Organisation Behind the Profile

Inventor

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Italian

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

The inventor is looking for manufacturing or a commercial agreement with technical assistance with companies in the sector of the dental industry (producers of tooth care devices), able to implement the invention and to bring it into the market.

Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Manufacturing agreement
Commercial agreement with technical assistance

Technology Request

Looking for manufacturer of metal bellows expansion joints

Summary

A Swiss intergovernmental organization / research centre is looking for supplier of 600 metal bellows expansion joints of internal diameters between 40 mm and 120 mm for connecting the hydraulic circuits of existing superconducting magnets. The partner sought for a manufacturing agreement will be able to deliver the bellows according to the tolerances listed.

Creation Date	16 November 2018
Last Update	23 November 2018
Expiration Date	24 November 2019
Reference	TRCH20181116001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/07483fa2-ca3f-472e-923d-551f1521371b

Details

Description

The Swiss NGO & research centre intends to place a contract (manufacturing agreement) for the supply of 600 metal bellows expansion joints.

The metal bellows expansion joints will be used to connect the hydraulic circuits of superconducting magnets and will provide flexibility for installation and thermal contractions. The operating temperature spreads from 1.9 K (-272.15 °C) to ambient temperature, and the internal operating pressure from vacuum to 20 bar.

Technical Specification or Expertise Sought

The delivered parts shall comply with the following parameters and conditions:

- The metal bellows expansion joints shall be designed, manufactured and tested according to the standards EN 13445 or EN 14917+A1 and the Pressure European Directive 2014-68-EU for fluid of group 2;
- The metal bellows expansion joints shall respect the design parameters in Table 1
- Edge welded expansion joints technology is not accepted;
- The radial edge weld design is the only allowed design for the bellows attachment welds;
- All parts shall be made of EN 1.4404 or EN 1.4435 stainless steel grades;
- The expansion joints shall consist of a series of formed convolutions made of one or several plies welded at each extremity to cylindrical weldable ends. Ring supports shall be welded on each weldable end (see figure 1);

- Each type of expansion joint shall be fatigue tested at ambient temperature under the parameters in Table 1;
- The expansion joints shall be individually pressure tested according to the Pressure European Directive 2014-68-EU;
- The expansion joints shall be cleaned according to EN 12300;
- The expansion joints shall be individually leak tested according to the EN 1779-A1 by certified personnel to ISO 9712 non-destructive testing (NDT), level 2 and meet the 1.10-10 mbar.l.s-1 requirement.

Table 1:

Internal diameter 40 to 120mm
 Expansion joint convoluted length Up to 300mm
 Number of cycles 500
 Axial stroke Up to 30mm
 Lateral stroke Up to 10mm
 Internal relative pressure Up to 20bar
 External relative pressure Up to 25bar
 Axial elastic spring rate Up to 1000 N/mm
 Temperature 1.9 to 300K

The parts shall comply with the following norms and standards:

- Pressure Equipment Directive (PED) 2014/68/EU;
- EN 13445: Unfired pressure vessels;
- EN 14917+A1: Metal bellows expansion joints for pressure applications;
- EN 10204: Metallic products – Types of inspection documents;
- EN 10028-7: Flat products made of stainless steels for pressure purposes – Part 7: Stainless steels;
- EN 10216-5: Seamless steel tubes for pressure purposes – Technical delivery conditions – Part 5: Stainless steel tubes;
- EN 1779-A1: Non-destructive testing : leak testing : criteria for method and technique selection;
- EN 12300: Cryogenic vessels – Cleanliness for cryogenic services;
- ISO 9712: Non-destructive testing – Qualification and certification of NDT personnel.
Requirement: Level 2.

Keywords

Technology

02002008 Jointing (soldering, welding, sticking)
 02007010 Metals and Alloys

Market

08001009 Speciality/performance materials: producers and fabricators
 08001012 Speciality metals (including processes for working with metals)
 08003001 Machine tools, other metal working equipment (excl. numeric control)

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
French

Client Country

Switzerland

Partner Sought

Type and Role of Partner Sought

The partner sought is active in the manufacturing and testing of metal joints.

The tasks to be performed by the partner sought are:

- Engineering design file for the expansion joints;
- Preparation of the drawings of the expansion joints;
- Fatigue test campaign;
- Procurement of all materials;

- Pre-series and series manufacturing;
- Inspection and tests;
- Cleaning;
- Quality control and associated documentation;
- Individual packing;
- Shipping to Switzerland if required

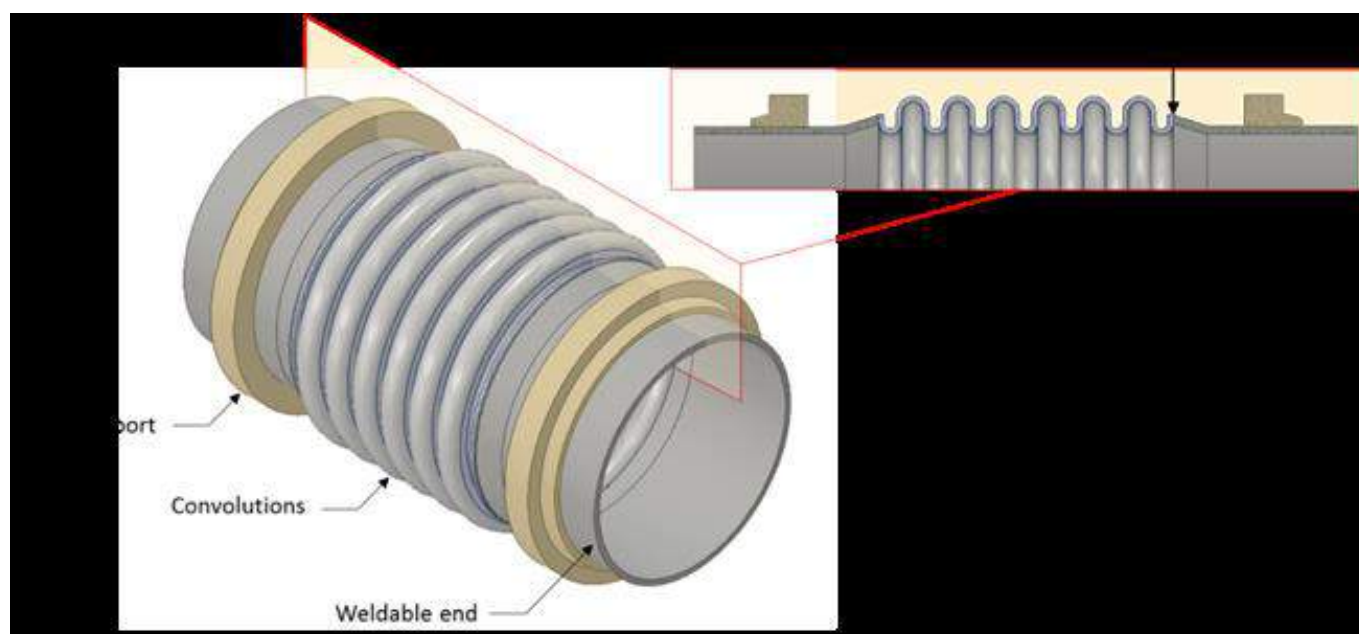
Type and Size of Partner Sought

SME 11-50, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Manufacturing agreement

Attachments



3D representation of a model joint.

Technology Request

A Chinese company is looking for modular integrated design and control technology for intelligent lubrication system of new energy vehicle

Summary

A Chinese engine pump manufacturing company is looking for modular integrated design and control technology for intelligent lubrication system of new energy vehicle. They want to cooperate with partners through research cooperation agreement and technical cooperation agreement.

Creation Date	02 September 2018
Last Update	05 December 2018
Expiration Date	06 December 2019
Reference	TRCN20180902003
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/dfb2e9d2-ee46-46ed-8d58-6940f8e1a769

Details

Description

The company which established in 1949, is located in Hengyang City, Hunan Province.

Its main products include oil pump, water pump, oil transfer pump, gearbox pump, other auto parts and related products.

They are looking for modular integrated design and control technology for intelligent lubrication system of new energy vehicle. .

The technology request includes:

1. integrated design of high efficiency miniaturized brushless dc motor
2. intelligent control technology of brushless dc motor
3. Semi-physical simulation technology of intelligent lubrication system
4. Modular integrated design technology of motor oil pump/electric gearbox pump

They want to cooperate with partners through research cooperation agreement and technical cooperation agreement.

The partner can help the company develop the request technology or directly provide it.

Technical Specification or Expertise Sought

1.Design of the hardware circuit of the controller. The hardware of the driving system is mainly composed of the main control chip circuit, the three-phase inverter bridge driving circuit and other auxiliary circuits. Faced with the need of multiple controllers, the modular design idea is adopted to separate the circuit modules, improve the design efficiency and reliability, and meet the requirements of automobile industrialization.

2. The brushless dc motor control method includes the control method with position sensor and without position sensor. When there is no position sensor, the rotor position detection based on the reverse electromotive force method is used to detect, and the speed closed loop control of the three-phase motor is combined to realize the control of brushless dc motor. Meet the requirements of quick start under various oil temperature conditions.

Keywords

Technology

01002010

Printed circuits and integrated circuits

02003005

Information processing & Systems, Workflow

Market

08003006

Power transmission equipment (including generators & motors)

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

Ref: TRCN20180902003

Industry >500

Year Established

1949

Turnover

>500M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Chinese

Client Country

China

Partner Sought

Type and Role of Partner Sought

The company is looking for R&D institution or company involved in modular integrated design and control technology for intelligent lubrication system of new energy vehicle. The company is interested in research cooperation and technical cooperation.

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Technology Request

Looking for a manufacturer of tungsten shielding elements.

Summary

A Swiss intergovernmental organization / research centre is looking for supplier of around 3000 shielding elements made from Tungsten Heavy Alloy (WHA) with low magnetic permeability. The partner sought for a manufacturing agreement will be able to manufacture and deliver the shielding elements according to the tolerances listed.

Creation Date	16 November 2018
Last Update	23 November 2018
Expiration Date	24 November 2019
Reference	TRCH20181116002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/8dffe29d-b6d4-46ff-a32f-fa641317feed

Details

Description

The accelerator currently used by the Swiss NGO is installed in a 27 km circumference tunnel, about 100 m underground. Its design is based on superconducting twin-aperture cryo-magnets which operate in a superfluid helium bath at 1.9 K.

A project is running with the aim to upgrade the collider after 2020-2025 in order to maintain scientific progress and exploit its full capacity. By increasing its peak luminosity by a factor five over nominal value it will be able to reach a higher level of integrated luminosity, nearly ten times the initial design target. To this aim, the research centre is exploring new beam configurations and new advanced technologies in the domain of superconductivity, cryogenics, rad-hard materials, electronics and remote handling.

New beam screens are being designed for the beam apertures of the new cryo-magnets to ensure the required beam aperture while maintaining the ultra-high beam vacuum.

The beam screens will be equipped with tungsten heavy alloy shielding elements to intercept collision debris from the experiments, in order to minimise the heat load to the 1.9 K cryogenic system.

The Swiss NGO is looking for partners able to fulfil a manufacturing agreement for these types of tungsten shielding elements, according to the specifications detailed in the following and to drawings that will be provided separately.

Technical Specification or Expertise Sought

The chemical composition shall be in accordance with the following parameters:

Min W : 95% (The minimum percentage of tungsten shall be respected to ensure the efficiency of the shielding elements)

Max Cu+Ni : 5% (The percentage of copper and nickel shall be respected to ensure the mechanical properties)

Max Co : 0.1% (The percentage of cobalt shall not be exceeded to limit the residual radioactivity)

Max Fe : 0.003% (The maximum percentage of iron shall be respected to ensure the magnetic properties stipulated below)

Magnetic permeability of the shielding element should be

- At 60 K and 1×10^6 A/m : 1.0015

- At 60 K and 6×10^6 A/m : 1.0005

The finished shielding elements shall not present visible voids and shall be exempt from cracks. The density shall be 18.05 ± 0.3 kg/dm³.

The mechanical properties shall be according to the following:

Tensile strength Rm min 700 MPa

Yield stress Rp0.2% min 600 MPa

Elongation at break A5 min. 5%

Hardness HRC ≤ 34

Use of machining coolants/lubricants shall be subject to the Swiss organisation prior approval. Only halogen-free and silicone-free products are allowed.

Wire erosion in an aqueous solution is allowed provided measures are taken to avoid Zn containing residues on the components. Wire erosion in oil is not allowed since the oil residues cannot be sufficiently removed during cleaning.

In order to limit the outgassing rate, the finished shielding elements shall undergo an outgassing treatment under vacuum at $\geq 700^\circ$ C.

Keywords

Technology

01002006	Magnetic and superconductor materials/devices
02002010	Machining (turning, drilling, moulding, planing, cutting)
02007010	Metals and Alloys

Market

08001009	Speciality/performance materials: producers and fabricators
08001012	Speciality metals (including processes for working with metals)
08003001	Machine tools, other metal working equipment (excl. numeric control)

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
French

Client Country

Switzerland

Partner Sought

Type and Role of Partner Sought

The partner sought is qualified in the manufacturing and testing of tungsten heavy alloy (WHA) parts.

The tasks to be performed by the partner sought:

- Production of the WHA material (forming and sintering);
- Machining of the components according to drawings provided by the Swiss research centre;
- Certificates of each sintering lot demonstrating the characteristics stated in the profile;

- Certificates of the finished shielding elements demonstrating compliance with the drawings;
- Packing of the components;
- Shipping to Switzerland if required.

Type and Size of Partner Sought

SME 11-50,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Manufacturing agreement

Research & Development Request

H2020 DT-NMBP-03-2019: Manufacturers of spun-laid or dry-laid non-wovens sought for testing and introducing nano(particle) enabled surface functions such as fire retardancy, hydrophobicity, anti-microbial etc.

Summary

A network of three Research and Technology Organisations (RTO) and several companies are dealing with (nano)-particles, coatings, foils, textiles and non-wovens, their treatment and upscaling of innovative solutions close to production level. They are looking now for manufacturers (preferably SMEs) of spun-laid or dry-laid non-wovens interested in testing and introducing nano(particle) enabled surface functions to join their consortium for a proposal for the call H2020 DT-NMBP-03-2019.

Creation Date	30 November 2018
Last Update	11 December 2018
Expiration Date	11 January 2019
Reference	RDDE20181130001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/5e835656-45c2-4ea5-b716-1fe9cb8dddee

Details

Description

The network consisting of three European RTOs (Finland, Germany, France) and several companies is dealing with (nano)-particles, coatings, foils, textiles and non-wovens, their treatment and upscaling of innovative solutions close to production level. Further, some network partners are addressing various issues related to market introduction such as quality control, regulations, LCA, financing etc. The goal of the R&D project is to upscale and verify nano-enabled surface treatments in respective industrial environment. The solutions are needed due to exponentially growing environmental pollution problems (e.g. plastics in the seas) and growing resistance against antibiotics.

The large-scale pilot facilities of the network partners make first product demos possible without any investments in the participating companies. The project will use an open access pilot-line to produce nanomaterials and various SME manufacturing capabilities including novel technologies for providing customizable up-scalable nanoparticle (NP) dispersions.

The proposal will be addressed to the call H2020-NMBP-TO-IND-2018-2020 with the name "Open Innovation Test Beds for nano-enabled surfaces and membranes (IA)".

The network is looking for manufacturers (preferably SMEs) of spun-laid or dry-laid non-wovens interested in testing and introducing nano(particle) enabled surface functions such as fire retardancy, hydrophobicity, anti-microbial etc. The participating companies additionally have the benefit of receiving funding for e.g. tests at customers, marketing, addressing various issues related to market introduction such as quality control, regulations and LCA.

Funding scheme: Innovation Action
Deadline-Model: Two-stage submission
Deadline for the 1st stage: 22.01.2019
Deadline for the 2nd stage: 03.09.2019

Deadline for Expression of Interests: 25.12.2019
Anticipated duration of the project: 3 years (2020-2022)

Advantages and Innovations

The advantage of this approach is that we focus less on research but rather on market-oriented upscaling/ implementation of such innovative technologies and have the entire "market preparation/ introduction" service network including financial support involved.

Technical Specification or Expertise Sought

Manufacturers (preferably SMEs) of spun-laid or dry-laid non-wovens

Stage of Development

Proposal under development

Comments Regarding Stage of Development

Most of the available materials and processing (coating) technologies are available at high (TRL 4-5) levels. The project proposal is already quite advanced. Final target is TRL 7.

Keywords

Technology

02005004 Packaging for materials
02007024 Nanomaterials

Market

08001006 Processes for working with plastics
08001008 Membranes and membrane-based products
08005 Other Industrial Products (not elsewhere classified)

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Aeronautics, Space and Dual-Use Technologies
Automotive, Transport and Logistics
Materials
Nano- and Microtechnologies
Sustainable Construction
Textile and Fashion

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Within the test-bed, the project will help industrial partners to design and test new materials and up-scale technologies for novel packaging and non-woven solutions. Therefore they are looking

for industrial partners (preferable SMEs) of Manufacturers of spun-laid or dry-laid nonwovens (for recyclable and/or biodegradable novel fibre based packages and film solutions out of non-woven materials).

The partners are sought for nonwoven demonstrations. They should test and introduce nano(particle) enabled surface functions such as fire retardancy, hydrophobicity, anti-microbial etc.

Type and Size of Partner Sought

SME 11-50,251-500,SME 51-250,>500

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

Nanotechnologies, Advanced materials, Advanced manufacturing and processing, Biotechnology

Call title and identifier

H2020 DT-NMBP-03-2019: Open Innovation Test Beds for nano-enabled surfaces and membranes (IA)

Coordinator Required

No

Deadline for EOI

11 Jan 2019

Deadline of the Call

22 Jan 2019

Project Duration

144 week(s)

Weblink to the Call

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/dt-nmbp-03-2019.html>



3.

***TECNOLOGÍAS DE LA
CONSTRUCCIÓN***

Technology Offer

Epoxy resin filled with organic-inorganic filler, based on agricultural waste, decreases friction and increases wear resistance by 75% is offered under licence agreement

Summary

Czech university developed natural organic- inorganic filler at a low volume of 1.0 phr (parts per 100 parts of resin) that, when integrated in epoxy resin, can decrease coefficient of friction by 10 % and increase the wear resistance of a filled epoxy resin up to 75 %. The university would like to cooperate with a manufacturer of leveling materials, cements, polymer concrete compositions based on licence agreement.

Creation Date	22 November 2018
Last Update	05 December 2018
Expiration Date	06 December 2019
Reference	TOCZ20181122001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/b9f76991-ed17-4029-aa82-a2bfb836611d

Details

Description

Technologies comparable with the invention, dealing with the issue of abrasion resistance, do not use waste-based fillers that can bring optimal and specific quality of polymer composites. Due to organic-inorganic composition of the used filler, an interfacial adhesion is very good.

Natural organic-inorganic filler at low volume of 1.0 phr integrated in epoxy resin that has been developed by a Czech university can decrease coefficient of friction by 10 % and increase wear resistance of a filled epoxy resin by 75 %.

When compared to unfilled epoxy resin, the hardness of the filled one remains almost unchanged, this is positive in terms of mechanical parameters. The modulus of elasticity of a filled epoxy resin is reduced and the materials' toughness is increased. The presence of the filler does not increase the water absorption in epoxy resin matrix.

The main potential of the filled resin lies in the preparation of leveling materials, cements, polymer concrete composition, cast floors and surface finishing materials with high abrasion resistance or other products based on epoxy resin.

The university would like to cooperate with a manufacturer of leveling materials, cements and/or

polymer concrete compositions. License agreement is sought. The content of the licensing agreement will be know-how how to manufacture the filled resin.

Advantages and Innovations

- Organic- inorganic filler based on agricultural by-product
- Environmental character of the filler
- Low price of the filler
- Use of organic-inorganic natural, waste-based fillers with specific chemical compositions

Stage of Development

Field tested/evaluated

IPR Status

Exclusive Rights

Comment Regarding IPR status

A utility model valid in the Czech Republic.

Profile Origin

Private (in-house) research

Keywords

Technology

02006001	Materials, components and systems for construction
02007001	Adhesives
02007002	Building materials
02007005	Composite materials
02007020	Biobased materials

Market

08001007	Coatings and adhesives manufactures
08001009	Speciality/performance materials: producers and fabricators

NACE

F.41.2.0	Construction of residential and non-residential buildings
F.43.3.3	Floor and wall covering
F.43.3.9	Other building completion and finishing

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Ref: TOCZ20181122001

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Materials
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1953

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Slovak
Polish
Czech

Client Country

Czechia

Partner Sought

Type and Role of Partner Sought

The university would like to cooperate with a manufacturer of leveling materials, cements, polymer concrete compositions based on license agreement.

Type and Size of Partner Sought

University

Type of Partnership Considered

License agreement

Research & Development Request

H2020 LC-RUR-11-2019-2020: sustainable wood value chains: seeking cluster, industrial and R&D partners

Summary

A cluster of innovative SMEs, based in southern Italy, and a large university, working on sustainable Mediterranean buildings, are preparing a proposal for the call H2020 LC-RUR-11-2019-2020 to develop and test new technologies and environmentally friendly solutions using wood-based materials in (re)-construction and modernization of buildings. They look for other clusters and industrial/R&D partners to integrate complementary technologies and extend socio-economic / geographical coverage.

Creation Date	13 November 2018
Last Update	21 November 2018
Expiration Date	21 December 2018
Reference	RDIT20181113001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a8799f58-1524-4c88-8007-20613921bf8b

Details

Description

A large network with more than seventy companies, mainly SMEs and a few large national undertakings, has been recently recognised as a regional innovation cluster for sustainable building in a southern Italian region. The cluster managing body, together with a large University with engineering and socio-economic competencies, are working on a proposal for the H2020 topic LC-RUR-11-2019-2020 "Sustainable wood value chains" with a deadline on 23 January 2019.

One of the key characteristics of the cluster is the approach based on value chains to design and build new products and services, starting from five macro themes: wood, natural fibres, green walls, building's waste recovery, and smart building. As to wood products, the cluster includes companies operating along the whole value chain and it is focusing on the development and diffusion of innovative standards for production, certification and use of local wood species for structural purposes and components. In addition, the cluster is accredited with regional and local governments for sustainable building experimentations.

The University brings a consolidated engineering know-how on composite wood structures and components, modular green walls and nature based solutions, energy saving and passive systems, gained in several national and EU projects, also studied in terms of sustainability of the life cycle with the LCA (Life Cycle Assessment) methodology. A research group is also involved in the study of territorial impacts from a socio-economic perspective.

According to the topic, the overall project idea aims to develop and test new technologies and environmental friendly solutions for the use of wood-based materials in the (re)construction and/or retrofitting of buildings.

Based on their experience, the partners have identified their key contribution in pilot actions to develop and test wood-based solutions, certified for the Mediterranean climate, for structures and passive components in new constructions as well as to recover or reinforce historical earthquake-resistant timber framing in the Mediterranean Area.

Overall, the project should implement at least three/four pilot actions with extended demonstrations and product validation on a large scale.

To this aim, the partnership should be enriched with similar groupings, i.e. clusters, industrial companies, R&D centres, but with complementary technological solutions and possibly different climatic and/or socio-economic conditions, to integrate and extend the effective applications of multiple solutions.

Also, academic and/or institutional partners from third countries, able to contribute to specifications and adaptation to their territories, are sought.

The call deadline is 23 January 2019 but Expressions of Interests will be accepted by 21 December 2018 at the latest.

Keywords

Technology

02006001	Materials, components and systems for construction
02006002	Construction methods and equipment
02006003	Fire Resistance/Safety
02006006	Construction engineering (design, simulation)
02006007	Management of construction process & life

Market

09007001	Construction companies
09007002	Manufacture of construction materials, components and systems
09007003	Distribution of building products and systems
09007004	Engineering and consulting services related to construction

NACE

F.41.1.0	Development of building projects
F.41.2.0	Construction of residential and non-residential buildings
F.43.3.9	Other building completion and finishing
M.72.1.9	Other research and experimental development on natural sciences and engineering
M.72.2.0	Research and experimental development on social sciences and humanities

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

Other

Year Established

2018

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Italian

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

The final partnership should be able to:

- start with a set of identified innovative solutions, ready to be advanced to high TRL values

- develop prototypes and pilot actions on different conditions, eg. covering northern, central and southern EU regions, urban and rural areas,
- work with existing value chains at regional / national level with a direct involvement of clusters and/or industrial stakeholders

Thus, the ideal partners should be:

- innovative clusters, industrial companies, R&D centres,
- with technical and market knowledge on (diversified) sustainable wood-based solutions,
- possibly operating on different climatic and/or socio-economic conditions,
- connected with the other relevant actors (citizens, policy makers from urban/rural areas, businesses, architects, site-managers, etc.)

Key tasks include only marginal research activities and a strong emphasis on prototyping, testing, demonstrating, etc. to realise three/four pilot actions. Thus, industrial partners that may contribute to an experimental setting along the value chain are welcome.

In addition, a partner with a solid and specific background on territorial and socio-economic issues connected to the development of the value chains is welcome.

Finally, academic and/or institutional partners from third countries, able to contribute to specifications and adaptation to their territories, are sought.

The identification of the coordinator might be reviewed jointly with the whole partnership.

Type and Size of Partner Sought

SME 11-50, University, R&D Institution, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

H2020

Call title and identifier

LC-RUR-11-2019-2020 Sustainable wood value chains

Submission and evaluation scheme

Single stage

Anticipated Project Budget

10 M€

Coordinator Required

Yes

Deadline for EOI

21 Dec 2018

Deadline of the Call

23 Jan 2019

Project Duration

156 week(s)

Weblink to the Call

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/lc-rur-11-2019-2020.html>

Project Title and Acronym

BEST wood: Beyond Europe with sustainable technologies for wood



4.

MATERIALES

Technology Offer

Tailor-made ceramic formulations for coatings with advanced properties for the energy sector

Summary

A Basque SME that designs and produces tailor-made ceramic & cermet formulations offers antifouling and corrosion resistant coatings for seawater heat exchanger, high-temperature environments like power generation boilers and for off-shore marine machines. This SME has developed a technology that obtains much better results than conventional coatings sintered at low temperatures. They're looking for partners (Original Equipment Manufacturers) for technical cooperation or manufacturing agreement.

Creation Date	20 November 2018
Last Update	05 December 2018
Expiration Date	06 December 2019
Reference	TOES20180510001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/87b1bac4-6ff5-4df0-a987-4523c165b434

Details

Description

The corrosion and fouling are the main problems for both seawater heat exchanges and in high-temperature environments. The Basque company designs and produces tailor-made ceramic & cermet formulations suitable to be deposited by electrophoretic processes onto diverse base materials. As a result of several R&D projects, a new ceramic coating with high thermal resistance and anti-clogging properties has been developed.

This ceramic coating has quite good properties in general. One of the most promising properties is the excellent chemical resistance in comparison with vitreous conventional coatings sintered at low temperatures, as well as a high thermal resistance. Fume temperatures in boilers at this point can reach 650°C (1200° F), steam at 300°C (572°F) and a metal surface is estimated to be at almost 500°C (932°F).

This is very suitable for instance in very abrasive and hot environments (biomass boilers with a high amount of ashes and particles) and for crude oil boilers where the coating has to perform resistance to vanadate attack. Oil fumes in these environments rich in vanadates can also reach temperatures up to 700°C (1300°F) and a metal surface is estimated at 550°C (1000°F).

The target partners the Basque SME is looking for are Original Equipment Manufacturers (OEM) with whom it can establish a technical cooperation or a manufacturing agreement. These partners would operate as providers for refineries, power generation plants (waste to energy

included) and wind off-shore installations. The cooperation foreseen could be in the form of a co-development of a new final product with the advanced coatings, the development of a new version of an existing product in order to meet higher market specifications or carry out feasibility studies with customised tests for a specific application. In addition, it could also be considered a manufacturing agreement in the form of a subcontracting where the Basque SME develops a customised ceramic formulation for a specific application of the partner.

Advantages and Innovations

The technology developed that has already been tested, offers the following improvements in the efficiency of the installations:

- Much longer life expectancy for the tubing
- As ashes do not stick to the tubes: cleaning “shakes” can be reduced if not avoided
- As ashes do not stick to the tubes: Thermal efficiency will remain more constant as ash insulation will not grow, at least not as per nowadays
- As ashes do not stick to the tubes: It might become possible to increase the steam temperature thus increasing the Turbine efficiency
- This coating is also successfully applied to coat Thermocouple tubes made in AISI 310 with a longer life.

Stage of Development

Field tested/evaluated

IPR Status

Secret Know-how

Comment Regarding IPR status

Private (in-house) research.

Profile Origin

COSME

Keywords

Technology

02007003	Ceramic Materials and Powders
04002004	Furnace and boiler technologies
04002006	Heat exchangers
04007003	Process optimisation, waste heat utilisation
04007005	Heat pipes

Market

06002001	Oil, gas and coal
06003003	Wind energy
06003004	Marine energy
06010003	Energy for Industry

NACE

C.20.5.9

Manufacture of other chemical products n.e.c.

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Intelligent Energy

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2013

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Ref: TOES20180510001

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The partner sought has to be an Original Equipment Manufacturer that operates as provider for refineries, power generation plants (waste to energy included) or wind off-shore installations. Its role would be to provide the specifications and/or requirements of the product in which the coating is going to be applied based on the final application. The production facilities to be used during the collaboration will typically be the ones from the partner.

Type and Size of Partner Sought

SME 11-50, >500 MNE, 251-500, SME 51-250

Type of Partnership Considered

Manufacturing agreement
Technical cooperation agreement

Technology Offer

A Finnish university is looking for licensing partners for their multilayer coated paper substrate for printed electronics

Summary

A Finnish university is looking for licensees like specialty paper or printed electronics manufacturers for a multilayer coated paper substrate suitable for printed functional devices. The substrate can be recycled, and the raw materials used are widely available bulk chemicals for paper production and coating. The paper can be produced by roll-to-roll manufacturing and its properties can be readily tuned to suit the selected printing application and to achieve a desired function.

Creation Date	30 November 2018
Last Update	03 December 2018
Expiration Date	04 December 2019
Reference	TOFI20181129001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a580f6bd-bb1c-4da0-8aea-e30ea7b9df09

Details

Description

A Finnish university has developed a multilayer coated paper substrate for printed functional devices.

The invention is based on ca. 10 years of intense research activities, and the research group has collaborated tightly with industrial partners during its development. The paper substrate has been produced in pilot trials in industrial paper-making facilities and successfully tested in several proof-of-concept applications including for example a low-voltage organic transistor, an electrochromic pixel, oxygen sensor, hydrogen sulphide sensor and an ion-selective electrode.

The paper substrate comprises of a multilayer structure including a top coating, barrier layer, smoothing layer, pre-coating and basepaper. The substrate can be recycled, and the paper is therefore suited for "one-time" or "throwaway" applications. The raw materials used are widely available bulk chemicals for paper production and coating. The concept enables the use in a wide range of printing and coating methods. The surface properties of the substrate can be readily tuned or new ones added to achieve a desired function.

The versatile applicability of the developed paper substrate has been demonstrated with several proof-of-concept devices including transistors, ion-selective electrodes and chemical sensors.

The invention has granted patents in China and in nine European countries (GB, FR, DE, CH, FI, NL, SE, AT, BE).

Potential commercial application areas include for example bio- and chemical sensors, microfluidics, smart packaging, logistics management and tracking, single use electronic circuits, devices and displays.

The university is looking for licensees interested in commercial exploitation of the technology and acquiring the IP rights for the technology. Potential partners could be for example specialty paper manufacturers, or manufacturers of printed electronics with possibilities to outsource the production to a suitable paper production facility.

Advantages and Innovations

The advantages of the paper substrate with regard to its manufacturing include the possibility to produce it from widely available paper production and printing chemicals by roll-to-roll manufacturing. The properties of the substrate are advantageous in comparison to the available solutions due to its versatile functionality, its excellent barrier properties against liquids and its flexibility. The substrate is also recyclable, and it can also be considered to be an alternative to plastic substrates for printed electronics

Stage of Development

Field tested/evaluated

IPR Status

Patents granted

Profile Origin

Other

Keywords

Technology

01002010	Printed circuits and integrated circuits
02002002	Coatings
02007013	Paper technology
03009001	Flexography

Market

08001009	Speciality/performance materials: producers and fabricators
08001015	Other speciality materials
08005	Other Industrial Products (not elsewhere classified)
09004007	Printing and binding

Network Contact

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Swedish
Finnish

Client Country

Finland

Partner Sought

Type and Role of Partner Sought

The university is looking for companies interested in commercial exploitation of the technology and acquiring the IP rights of the granted patents.

Potential partners could be for example:

- specialty paper manufacturers
- manufacturers of printed electronics with possibilities to outsource the production to a suitable paper production facility.
- companies operating in bio- and chemical sensors, microfluidics, smart packaging, logistics management and tracking, single use electronic circuits, devices and displays

Type of Partnership Considered

License agreement

Technology Offer

Dutch developer and manufacturer of metal sheet machine with focus on roll forming is looking for cooperation based on a commercial agreement with technical assistance

Summary

A small Dutch company is specialised in the development and optimising of customised metal sheet roll forming lines for making products from coil to end product. Also mobile machines for production on the spot are being developed. The company is interested in technical and commercial cooperation with companies who are looking for application of roll forming techniques in their products. Cooperation will be based on a commercial agreement with technical assistance.

Creation Date	06 November 2018
Last Update	23 November 2018
Expiration Date	24 November 2019
Reference	TONL20181025001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0f0784bd-69ab-4c2a-a9e5-ef63c73cf56d

Details

Description

The company is supplier of sheet metal working machines, developer of sheet metal production lines and also of mobile roll formers.

The company is specialized in developing complete customized roll forming lines for open and closed profiles. These production lines include all necessary techniques ; feeding, de-coiling, stretching, bending and cutting. Also related techniques like rotating punching, in line servo punching and in line bending are being applied.

A long term specialty is the development of different mobile solutions for production on the spot, like gutters in greenhouses. Mobile roll forming machinery is unique all over the world.

The company also advises in current production, in terms of method, costs and quality. It is very innovative in finding solutions for all kinds of technical problems in the field of roll forming.

Typical products are machinery for producing roof and wall plating, air channels, cable ducts, all kinds of profiles for furniture and horticultural applications, casings etc.

The company is interested in technical and commercial cooperation with companies who are looking for application of roll forming technics in their products. Cooperation can be arranged in the frame of a commercial agreement with technical assistance.

Advantages and Innovations

Roll forming is one of the fastest and cheapest techniques for manufacturing serial products based on sheet metal.

Mobile solutions, for producing gutters for instance, are very efficient in several circumstances: every possible length can be produced, jointing profiles are superfluous.

Several materials can be processed: steel, stainless steel, aluminium, coated steel, etc.

Producing different profiles on one machine is possible by changing the forming tools.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Keywords

Technology

02002005

Forming (rolling, forging, pressing, drawing)

02007010

Metals and Alloys

Market

08002007

Other industrial automation

08003001

Machine tools, other metal working equipment (excl. numeric control)

NACE

C.25.5.0

Forging, pressing, stamping and roll-forming of metal; powder metallurgy

C.28.4.1

Manufacture of metal forming machinery

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Materials

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2002

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Dutch
German

Client Country

Netherlands

Partner Sought

Type and Role of Partner Sought

The company is looking for manufacturing companies who are interested in application of roll forming technics in their products .

Type of Partnership Considered

Commercial agreement with technical assistance

Technology Offer

Epoxy resin filled with organic-inorganic filler, based on agricultural waste, decreases friction and increases wear resistance by 75% is offered under licence agreement

Summary

Czech university developed natural organic- inorganic filler at a low volume of 1.0 phr (parts per 100 parts of resin) that, when integrated in epoxy resin, can decrease coefficient of friction by 10 % and increase the wear resistance of a filled epoxy resin up to 75 %. The university would like to cooperate with a manufacturer of leveling materials, cements, polymer concrete compositions based on licence agreement.

Creation Date	22 November 2018
Last Update	05 December 2018
Expiration Date	06 December 2019
Reference	TOCZ20181122001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/b9f76991-ed17-4029-aa82-a2bfb836611d

Details

Description

Technologies comparable with the invention, dealing with the issue of abrasion resistance, do not use waste-based fillers that can bring optimal and specific quality of polymer composites. Due to organic-inorganic composition of the used filler, an interfacial adhesion is very good.

Natural organic-inorganic filler at low volume of 1.0 phr integrated in epoxy resin that has been developed by a Czech university can decrease coefficient of friction by 10 % and increase wear resistance of a filled epoxy resin by 75 %.

When compared to unfilled epoxy resin, the hardness of the filled one remains almost unchanged, this is positive in terms of mechanical parameters. The modulus of elasticity of a filled epoxy resin is reduced and the materials' toughness is increased. The presence of the filler does not increase the water absorption in epoxy resin matrix.

The main potential of the filled resin lies in the preparation of leveling materials, cements, polymer concrete composition, cast floors and surface finishing materials with high abrasion resistance or other products based on epoxy resin.

The university would like to cooperate with a manufacturer of leveling materials, cements and/or

polymer concrete compositions. License agreement is sought. The content of the licensing agreement will be know-how how to manufacture the filled resin.

Advantages and Innovations

- Organic- inorganic filler based on agricultural by-product
- Environmental character of the filler
- Low price of the filler
- Use of organic-inorganic natural, waste-based fillers with specific chemical compositions

Stage of Development

Field tested/evaluated

IPR Status

Exclusive Rights

Comment Regarding IPR status

A utility model valid in the Czech Republic.

Profile Origin

Private (in-house) research

Keywords

Technology

02006001	Materials, components and systems for construction
02007001	Adhesives
02007002	Building materials
02007005	Composite materials
02007020	Biobased materials

Market

08001007	Coatings and adhesives manufactures
08001009	Speciality/performance materials: producers and fabricators

NACE

F.41.2.0	Construction of residential and non-residential buildings
F.43.3.3	Floor and wall covering
F.43.3.9	Other building completion and finishing

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Materials
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1953

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Slovak
Polish
Czech

Client Country

Czechia

Partner Sought

Type and Role of Partner Sought

The university would like to cooperate with a manufacturer of leveling materials, cements, polymer concrete compositions based on license agreement.

Type and Size of Partner Sought

University

Type of Partnership Considered

License agreement

Technology Offer

Composite bio-compatible material on the basis of titanium alloys and vitreous carbon coating intended for endoprosthesis

Summary

A Bulgarian research institute has developed an innovative composite bio-compatible material on titanium basis with glassy (vitreous) carbon coating. It is intended for production of endoprosthesis due to its biological compatibility and resistance to biochemical corrosion. The researchers are seeking industrial or research partners for technical cooperation or research cooperation agreements.

Creation Date	03 December 2018
Last Update	06 December 2018
Expiration Date	07 December 2019
Reference	TOBG20181122001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/c7f6c955-c932-4790-80f1-b6d445244d79

Details

Description

The Bulgarian research unit conducts R&D in metal science, specialised coatings, heat treatment, casting, crystallisation, structure and properties of metals, alloys and composites and nano-materials, plasticity modelling, destruction of materials, etc. They have excellent experience in international collaboration and project implementation.

Titanium alloys are the basis for the production of endo-prostheses as titanium is a bio-compatible material for the human body. After a stay in the human body it is possible that part of the Al and V present in the titanium alloy can be partially ionized and corrosion and loosening of the bond between the titanium implant and the human bone may occur. Deposition of layer of vitreous (nascent) carbon, which is also proven to be bio compatible, on the titanium matrix neutralises the biochemical corrosion.

The fabrication of the hip joint or other endo-prosthesis can be made by traditional metal working of titanium. On the other hand, additive manufacturing may be used to prepare implant for each individual case. The 3-D printer with titanium powder will follow the shape and the dimensions of the damaged organ to produce an individual implant.

The different use of the implant needs different surface smoothness, e.g. the stem of the hip joint prosthesis is preferred to be more rough for better intergrowth with the bone whilst the femoral head must be polished to decrease the friction with the acetabular shell and

polyethylene insert. The surface roughness is achieved by plasma spraying of titanium particles and the smoothness – by mechanical polishing.

The glassy carbon coating is prepared by applying a solution of heat treated long chain organic substance on the surface of the titanium sample. Then the item is dried and heat treated. In order to improve the adhesion of the vitreous carbon layer the heat treatment was performed at 1350 – 1400 degrees Celsius in inert environment. Titanium carbide was created during this heat treatment which is an intermediary layer between the titanium substrate and the vitreous carbon coating. In order to have better layer this procedure is repeated several times. After the heat treatment only carbon in vitreous (glassy) state remains on the surface. It has amorphous structure and its hardness is that of normal silicate glass (7 by Mohs scale). Since the coating is only carbon it is at least or even more bio-compatible than the titanium and titanium alloys.

The institute is looking for industrial and research partners for technical cooperation agreements and research cooperation agreements in order to further develop the technology and adapt it to the specific needs.

Advantages and Innovations

- The composite material is with improved bio-compatibility and wear resistance compared to titanium only implants.
- The roughness of the surface can be controlled depending on the conditions it will be used in.
- The 3-D printing with titanium powder gives the opportunity to produce an individual implant according to the shape and the dimensions of the damaged organ.
- The glassy carbon coating adheres well to the titanium surface and it can be polished to the desired roughness. It is well tolerated by the adjacent tissues.

Stage of Development

Under development/lab tested

IPR Status

Secret Know-how

Profile Origin

Other

Keywords

Technology

02001001	3D printing
02002002	Coatings
02007005	Composite materials
02007010	Metals and Alloys
06001020	Physiotherapy, Orthopaedic Technology

Market

05003003	Surgical implants
05005015	Orthopaedics

NACE

Ref: TOBG20181122001

M.72.1.9

Other research and experimental development on natural sciences and engineering

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Healthcare
Materials

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1960

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Bulgarian
Russian

Ref: TOBG20181122001

Client Country

Bulgaria

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: the research team is looking for industrial and R&D partners;
- Specific area of activity of the partner: partner sought related to the medical, orthopedy or related sectors; entities working on development and manufacture of composite materials and bio-compatible materials;
- Task to be performed: testing of the prototype, production, marketing or adaptation to specific needs; receiving the necessary know-how from the developer via technical cooperation agreements or research cooperation agreements are considered.

Type and Size of Partner Sought

SME 11-50,R&D Institution,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Technology Offer

Handheld and stationary gas leak detectors for quick and highly-selective detection of gases like methane, propane, carbon dioxide, hydrogen, ammonia and refrigerants for applications in buildings, installations, automotive, energy and safety plants.

Summary

A German SME specialized in advanced ceramic sensor technologies offers a wide range of quick and highly-selective gas leak detectors as handheld and stationary versions, based on advanced ceramic Platinum thin-film technology. The devices can be used for gas detection in buildings, pipelines, installations, automotive, energy, environment and safety plants. Seeking industrial companies and end-users with interest in commercial agreements with technical assistance.

Creation Date	08 November 2018
Last Update	15 November 2018
Expiration Date	16 November 2019
Reference	TODE20181107001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/38cf3bc1-a059-4fa3-b00a-bb9306d0c367

Details

Description

Hazardous gas leaks occur in most industrial and civil plants, vehicles, installations and buildings and require quick reactions. For safety reasons the responsiveness and accuracy of the gas detection is very important and needs reliable control and measurement via sensor technologies.

The innovative German SME is specialized in patented ceramic sensor technologies and offers a wide range of quick and highly-selective gas leak detectors, based on advanced ceramic Platinum (Pt) thin-film technology. The handheld and stationary gas leak detectors are selective for methane (CH₄), propane (C₃H₈), carbon dioxide (CO₂), hydrogen (H₂), ammonia (NH₃) and refrigerants to identify potentially hazardous gas leaks. The detectors can be used for a wide range of applications, such as in industrial plants, refineries, vehicles, pharma and cosmetics manufacturing, fumigation facilities, paper pulp mills, aircraft and shipbuilding facilities, hazmat operations, waste-water treatment facilities, indoor air quality testing and homes.

Main fields of application:

- building industry: pipeline construction and service for gas leak search and detection;
- installation, maintenance, service of systems for gas, air conditioning, ventilation etc. for gas leak detection;
- automotive industry and services: gas leak search and detection for air conditioning systems, gas vehicles etc.;
- energy engineering and plants;
- environmental technology;
- safety engineering.

Seeking industrial companies and end-users with interest in commercial agreements with technical assistance as follows:

- The company offers individual support to transfer the relevant precision gas measuring technology into customized solutions as it is essential for each specific highly-precise application to fulfill all user requirements.
- Providing additional support service for all above application fields according to the user requirements.

The company is also looking for distribution partners and regional representatives, wholesalers, importers.

Advantages and Innovations

- highly selective and highly sensitive devices
- quick response time (depending on gas type)
- automatic measuring range change-over
- automatic zero setting on air after switch on
- handheld, compact and robust metal case
- microprocessor controlled devices
- integrated rechargeable NiMH battery pack included
- with APEX certification (on request)

Stage of Development

Already on the market

IPR Status

Patents granted, Trade Marks

Comment Regarding IPR status

Many Patents; granted for DE and EU

Profile Origin

Private (in-house) research

Keywords

Technology

01003023	Environmental and Biometrics Sensors, Actuators
02007003	Ceramic Materials and Powders
02009009	Sensors for cars and transport

09001009 Sensor Technology related to measurements

Market

06009 Energy Distribution
09001005 Motor vehicles, transportation equipment and parts
09007004 Engineering and consulting services related to construction
09008003 Gas transmission and distribution

NACE

C.27.9.0 Manufacture of other electrical equipment

Network Contact

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Environment
Nano- and Microtechnologies
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

Industry SME 50-249

Year Established

1991

Turnover

10 - 20M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Seeking industrial companies and end-users with interest in commercial agreements with technical assistance in:

- building industry: pipeline construction and service for gas leak search/detection;
- installation, maintenance, service of systems for gas, air conditioning, ventilation etc.
- automotive industry and services: gas leak search/ detection on air conditioning systems, gas vehicles etc.
- energy engineering/plants; environmental technology; safety engineering;

a) The company offers individual support to transfer the relevant precision gas measuring technology into customized solutions as it is essential for each specific highly-precise application to fulfill all user requirements.

b) Providing additional support service for such application fields in automotive, transport and logistics, biotech, pharma/cosmetics, energy, environment, industrial equipment and machinery, space/aerospace to fulfill user requirements.

Looking also for distribution partners, regional representatives, wholesalers, importers.

Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE, 251-500, SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement

Technology Request

Looking for manufacturer of metal bellows expansion joints

Summary

A Swiss intergovernmental organization / research centre is looking for supplier of 600 metal bellows expansion joints of internal diameters between 40 mm and 120 mm for connecting the hydraulic circuits of existing superconducting magnets. The partner sought for a manufacturing agreement will be able to deliver the bellows according to the tolerances listed.

Creation Date	16 November 2018
Last Update	23 November 2018
Expiration Date	24 November 2019
Reference	TRCH20181116001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/07483fa2-ca3f-472e-923d-551f1521371b

Details

Description

The Swiss NGO & research centre intends to place a contract (manufacturing agreement) for the supply of 600 metal bellows expansion joints.

The metal bellows expansion joints will be used to connect the hydraulic circuits of superconducting magnets and will provide flexibility for installation and thermal contractions. The operating temperature spreads from 1.9 K (-272.15 °C) to ambient temperature, and the internal operating pressure from vacuum to 20 bar.

Technical Specification or Expertise Sought

The delivered parts shall comply with the following parameters and conditions:

- The metal bellows expansion joints shall be designed, manufactured and tested according to the standards EN 13445 or EN 14917+A1 and the Pressure European Directive 2014-68-EU for fluid of group 2;
- The metal bellows expansion joints shall respect the design parameters in Table 1
- Edge welded expansion joints technology is not accepted;
- The radial edge weld design is the only allowed design for the bellows attachment welds;
- All parts shall be made of EN 1.4404 or EN 1.4435 stainless steel grades;
- The expansion joints shall consist of a series of formed convolutions made of one or several plies welded at each extremity to cylindrical weldable ends. Ring supports shall be welded on each weldable end (see figure 1);

- Each type of expansion joint shall be fatigue tested at ambient temperature under the parameters in Table 1;
- The expansion joints shall be individually pressure tested according to the Pressure European Directive 2014-68-EU;
- The expansion joints shall be cleaned according to EN 12300;
- The expansion joints shall be individually leak tested according to the EN 1779-A1 by certified personnel to ISO 9712 non-destructive testing (NDT), level 2 and meet the 1.10-10 mbar.l.s-1 requirement.

Table 1:

Internal diameter 40 to 120mm
 Expansion joint convoluted length Up to 300mm
 Number of cycles 500
 Axial stroke Up to 30mm
 Lateral stroke Up to 10mm
 Internal relative pressure Up to 20bar
 External relative pressure Up to 25bar
 Axial elastic spring rate Up to 1000 N/mm
 Temperature 1.9 to 300K

The parts shall comply with the following norms and standards:

- Pressure Equipment Directive (PED) 2014/68/EU;
- EN 13445: Unfired pressure vessels;
- EN 14917+A1: Metal bellows expansion joints for pressure applications;
- EN 10204: Metallic products – Types of inspection documents;
- EN 10028-7: Flat products made of stainless steels for pressure purposes – Part 7: Stainless steels;
- EN 10216-5: Seamless steel tubes for pressure purposes – Technical delivery conditions – Part 5: Stainless steel tubes;
- EN 1779-A1: Non-destructive testing : leak testing : criteria for method and technique selection;
- EN 12300: Cryogenic vessels – Cleanliness for cryogenic services;
- ISO 9712: Non-destructive testing – Qualification and certification of NDT personnel.
Requirement: Level 2.

Keywords

Technology

02002008 Jointing (soldering, welding, sticking)
 02007010 Metals and Alloys

Market

08001009 Speciality/performance materials: producers and fabricators
 08001012 Speciality metals (including processes for working with metals)
 08003001 Machine tools, other metal working equipment (excl. numeric control)

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
French

Client Country

Switzerland

Partner Sought

Type and Role of Partner Sought

The partner sought is active in the manufacturing and testing of metal joints.

The tasks to be performed by the partner sought are:

- Engineering design file for the expansion joints;
- Preparation of the drawings of the expansion joints;
- Fatigue test campaign;
- Procurement of all materials;

- Pre-series and series manufacturing;
- Inspection and tests;
- Cleaning;
- Quality control and associated documentation;
- Individual packing;
- Shipping to Switzerland if required

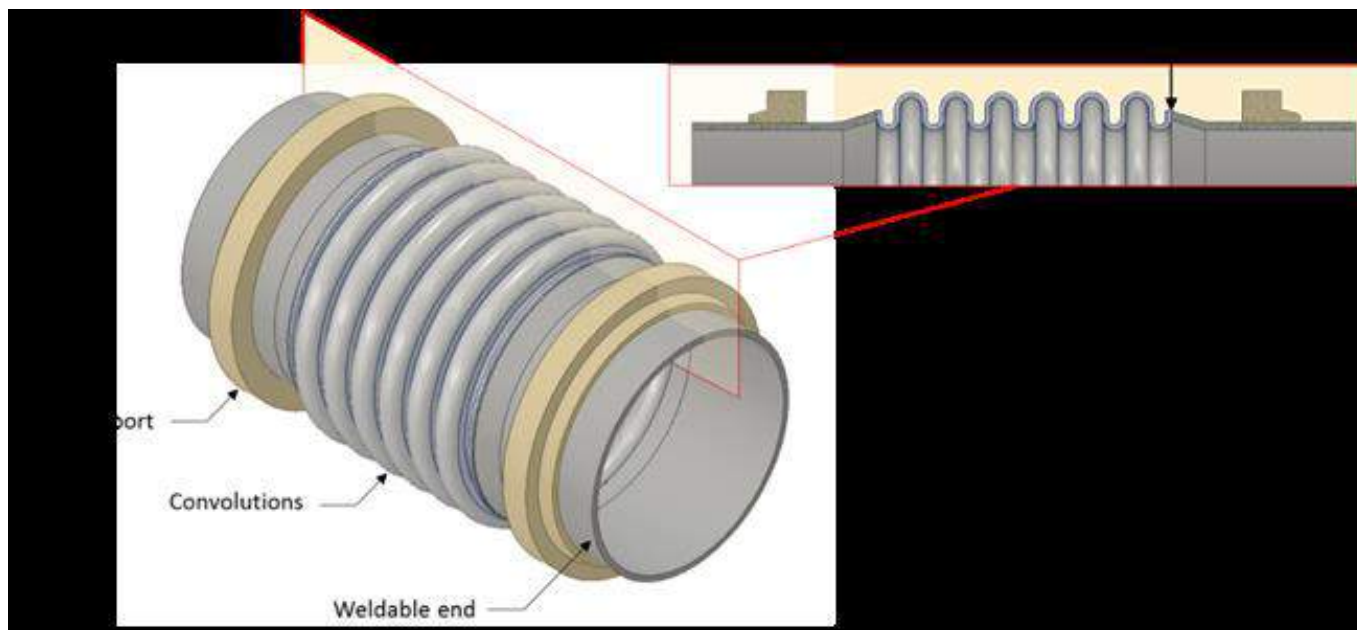
Type and Size of Partner Sought

SME 11-50, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Manufacturing agreement

Attachments



3D representation of a model joint.

Technology Request

Seeking partners with expertise in high-tech textiles and novel polymers to develop ecological garments

Summary

The UK company is a textile design business operating in the high end fashion market and specialising in organic and recyclable fabrics for outerwear and clothing accessories. They are looking for partners with expertise in sustainable and novel high-tech textiles to help them develop innovative eco-friendly fashion products. A technical cooperation agreement is sought.

Creation Date	26 November 2018
Last Update	05 December 2018
Expiration Date	06 December 2019
Reference	TRUK20181122002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/4cf14224-cf81-453f-829c-dc66f6fb49b6

Details

Description

The UK designer is a new brand focussing on sustainability and innovation garments while working with high quality recycled fabrics to create a range of new eco-friendly fashion products.

Their next collection will be made of natural and recycled materials, a collection of cloaks made of natural plants. The outer shell is made cruelty-free using organic and natural fabrics which is made in a sustainable way and withstands cold/very warm temperatures. Each garment is made through artisanal processes, using suppliers from Italy and France.

The company's ethical vision revolves around using local sustainable raw materials and respecting the workers involved in the manufacturing process, thus making sure that every part of the supply chain is highly trained and valued. Their goal is to develop innovative products free from chemicals while being fully transparent to their customers.

They are currently looking to expand their audience and their product range to include accessories and outerwear made out of natural fabrics for the high-end market. To this end, they require partners who can bring their technical expertise in high-tech textiles in order to improve and add to the UK company's range of products.

The UK company will consider a technology cooperation agreement.

Technical Specification or Expertise Sought

The UK company's innovative vision is focused on the local handcraft value and the ethical issues using polymers out of natural, organic or recycled fabrics, such as banana peel, pineapple peel, coffee waste, plastic (PET), hemp, nettle, organic cotton etc. In effect, any waste that can create polymers and then used into a yarn and fabric.

Ideally a mix of all these fabrics will be added onto the UK company's garments to create a high performance piece of design (coatings, insulation for outerwear included). Any chemicals should be eco-design, following a life cycle assessment.

Therefore the partner is expected to have the required technical expertise in novel polymers for garments and fashion accessories to be able to integrate these into the new type of eco-fashion offered by the UK company. The partner's knowledge of these materials will be implemented into the UK company's collection and the goal is to develop more skills to create innovative garments.

Keywords

Technology

02007018	Advanced Textile Materials
03005005	Non weaving related to Textiles Technology
03005007	Textile fibres
03005008	Weaving related to Textiles Technology

Market

07004001	Clothing, shoes and accessories (including jewellery)
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NACE

C.14.1.3	Manufacture of other outerwear
C.14.1.9	Manufacture of other wearing apparel and accessories

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2017

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The UK company is involved in the WORTH Partnership Project (EU funded programme). This project perfectly combines technology and sustainability in line with the company vision. This programme has allowed them to already form a small international network that includes laboratories and manufacturers but more partners with the technology expertise would be welcome to join in.

Languages Spoken

English
French
Spanish

Client Country

United Kingdom

Partner Sought

Type and Role of Partner Sought

Ideally the UK company would like to work with textile experts, e.g. technology transfer units who have contacts in the textile industry, or laboratories specialising in novel textile.

The partners will be willing to work with raw materials, bringing their technological know-how and expertise in analysing/testing these new materials and advising on their suitability for the new products that the UK company designs.

These partners may also have the relevant contacts (e.g. manufacturers) through their own network who can help with prototyping. Such connection would be valuable to the UK company

This combined technology know-how will enable the partners to develop together innovative projects which needs to be free of any chemicals colorants. So the ecological approach and experience is key here.

The type of partnership envisaged is a technical cooperation agreement.

Type of Partnership Considered

Technical cooperation agreement

Technology Request

Seeking partners with expertise in high-tech textiles and novel polymers to develop ecological garments

Summary

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Description

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Keywords

Technology

02007018	Advanced Textile Materials
03005005	Non weaving related to Textiles Technology
03005007	Textile fibres
03005008	Weaving related to Textiles Technology

Market

07004001	Clothing, shoes and accessories (including jewellery)
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NACE

C.14.1.3	Manufacture of other outerwear
C.14.1.9	Manufacture of other wearing apparel and accessories

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2017

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The UK company is involved in the WORTH Partnership Project (EU funded programme). This project perfectly combines technology and sustainability in line with the company vision. This programme has allowed them to already form a small international network that includes laboratories and manufacturers but more partners with the technology expertise would be welcome to join in.

Languages Spoken

English
French
Spanish

Client Country

United Kingdom

Partner Sought

Type and Role of Partner Sought

Ideally the UK company would like to work with textile experts, e.g. technology transfer units who have contacts in the textile industry, or laboratories specialising in novel textile.

The partners will be willing to work with raw materials, bringing their technological know-how and expertise in analysing/testing these new materials and advising on their suitability for the new products that the UK company designs.

These partners may also have the relevant contacts (e.g. manufacturers) through their own network who can help with prototyping. Such connection would be valuable to the UK company

This combined technology know-how will enable the partners to develop together innovative projects which needs to be free of any chemicals colorants. So the ecological approach and experience is key here.

The type of partnership envisaged is a technical cooperation agreement.

Type of Partnership Considered

Technical cooperation agreement



5. ***TRANSPORTES***

Technology Offer

Image processing algorithms for onboard optical Earth Observation (EO) satellites

Summary

A Greek innovative ICT start-up company specialized in the field of object detection algorithms. The company has developed image processing algorithms for software or hardware co-design that can be integrated in earth observation (EO) cube satellites enhancing data exploitation, as well as enabling critical applications. Partners of any size or type, active in satellite sector or ICT companies providing similar solutions are sought interested to conclude technical or research agreements.

Creation Date	07 December 2018
Last Update	07 December 2018
Expiration Date	08 December 2019
Reference	TOGR20181207001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/820026ff-ed01-4818-9128-9f4895a7aa5f

Details

Description

A Greek innovative ICT company established in Athens, as part of the technology park of a large research center, has developed algorithms for software or hardware (SW/HW) co-design that can be integrated in earth observation cube satellites. The algorithms enhance data exploitation and enable critical applications such as the real-time object/change detection, real-time data screening and real-time monitoring for safety and security applications.

Apart from data acquisition and storage, the main data processing algorithms that have been heavily developed and deployed in satellite platforms are those that focusing on lossless compression of images. The aim is to address the challenge of the limitations posed by downlink bandwidth constraints and the limited viewing time of the ground stations. Several algorithms for multispectral and hyperspectral data (multispectral and hyperspectral imaging collect images of an object in a series of spectral windows with high spatial resolution) and data collected on red-green-blue images systems (RGB) are operationally deployed in all earth observation satellites.

The offered algorithms for software or hardware co-design include 3 modules. The first type is the onboard image quality evaluation. For the reduction of the storage and transmission requirements an initial onboard evaluation of the acquired data can be performed for assessing quantitatively the amount of clouds and shadows depicted in the acquired images. Above a certain threshold (e.g. more than 80% cloud coverage) the data can be discarded. The calculated quality layer can be exploited from operational geospatial services and for the

automated screening of freshly acquired data.

The second type of processing is the onboard top of atmosphere at sensor radiance. This method aims to deliver market-ready products. For this purpose, the basic radiometric calibration and sensor corrections can be applied onboard to the acquired data, enabling significantly near real-time applications. Depending on the image size (spatial and spectral resolution) the image mosaicking can be also exploited to deliver relative new products or to further enhance onboard processing for offering products.

A third type of processing is the onboard object detection and change detection algorithms for critical geospatial applications. Currently, a major limitation of earth observation satellite data is the significant delay (from few to dozen days) from their acquisition to their availability on the cloud, minimizing their utilization capabilities and exploitation for several applications. Onboard, real-time data analytics can shorten the time between data acquisition and the necessary action and response, for instance, in case of disasters. To this end, two sub-types of onboard data processing algorithms can be considered towards addressing critical geospatial applications. The first one refers to object detection algorithms which involve vegetation detection and mapping, water detection and mapping (e.g. inland, coastal, marine), man-made detection and mapping (e.g. roads, buildings) and ship/vessel detection in marine environments. The second one is change detection algorithms which include change and no-change alerts, flood mapping and oil/debris marine detection.

The company seeks to find collaborators which need to integrate algorithms in earth observation cube satellites enhancing data exploitation, as well as enabling critical applications. The company is also interested in cooperating with partners that are already in this area in order to push the object detection software to production and/ or integrate it with larger systems. The types of collaboration sought is technical or research collaboration, with various partners and provision of technical assistance from the Greek company.

Advantages and Innovations

The offered technology is a complete algorithm-based solution for SW/HW co-design that can be integrated in earth observation cube satellites enhancing data exploitation, as well as enabling critical applications such as like real-time object/change detection, real-time data screening and real-time monitoring for safety and security applications.

The advantages of the three specific modules are the following. First, the onboard image quality evaluation reduces the storage and transmission requirements. It should be noticed that more than 20% of the data acquired from e.g. Landsat-8 and Sentinel-2 satellites are covered with clouds and therefore cannot be exploited for any geospatial application. Moreover, cloud/shadow detection software modules can be implemented even with data collected from the visible spectrum on red-green-blue form (RGB), but more successfully with infrared and shortwave infrared spectral bands. Thus, the onboard evaluation of the acquired data can be performed for assessing quantitatively the amount of cloud and shadows depicted in the acquired images.

Satellite raw data (called Level-1 products) are usually computed on the ground stations or in the cloud, imposing time constrains in data exploitation. In view of this, the onboard top of atmosphere at sensor radiance and the basic radiometric calibration and sensor corrections can be applied onboard to the acquired data, enabling significantly near real-time applications.

Thirdly, the onboard object detection and change detection algorithms for critical geospatial applications provides real-time data analytics with shortened time between data acquisition and the necessary action and response. The onboard data processing algorithms can be considered towards addressing critical geospatial applications include object detection algorithms and change detection algorithms.

Overall, the offered solution is based on cutting-edge technologies and it is customizable.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Keywords

Technology

01003012	Imaging, Image Processing, Pattern Recognition
01006008	Satellite Technology/Positioning/Communication in GPS
01006009	Signal Processing
02011004	Satellite Navigation Systems
02011005	Space Exploration and Technology

Market

01005001	Satellite services/carriers/operators
01005002	Satellite ground (and others) equipment
01005004	Microwave and satellite components

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Aeronautics, Space and Dual-Use Technologies

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2017

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Greek

Client Country

Greece

Partner Sought

Type and Role of Partner Sought

- Type of collaboration: The ideal partner would be a company which need to integrate algorithms in earth observation cube satellites enhancing data exploitation, as well as enabling critical applications, such as like real-time object/change detection, real-time data screening and real-time monitoring for safety and security applications. The Greek company is willing to establish commercial agreement with technical assistance with partners of any size active in the field.

- Tasks to be performed: to implement offered technological solution in order to effectively embed the proposed algorithms in cube satellites systems and applications.

- Types of partnership: the Greek company is open to either technical or research collaborations with interested partners.

Type and Size of Partner Sought

SME 11-50, University, R&D Institution, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Technology Offer

Underwater communications technologies and systems expertise offered to companies

Summary

An Andalusian University group, focused in underwater (UW) communications technologies and systems, seeks companies involved with underwater communications to help them to develop products/technologies. Also companies who have specific needs of current underwater technologies to develop new solutions and applied them to their main activities. Research&Development or technical cooperation agreement with industrial partners are sought.

Creation Date	05 October 2018
Last Update	20 November 2018
Expiration Date	21 November 2019
Reference	TOES20180604002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/aab86869-ad44-4572-b6d9-f9de1256447f

Details

Description

The huge range of application of communications technologies and systems in underwater environments such as oil prospecting, pollution control, climate recording, prediction of natural disturbances, search and survey missions, national security and defense, marine biology evolution, fishing strategies, etc... makes the development of the ocean observation tools a great challenge that motivates the whole R&D community.

Currently some of the key lines of R&D in UW are to make information travel further with higher data rates, to increase the bandwidth and to avoid significant losses of signal strength. Also to reduce the energy consumption of underwater devices in order to increase underwater networks lifetime.

This Spanish R&D Group has the aim to provide the adapted expertise, technologies and team of researchers to partners that need to develop current underwater technologies. Composed by high-qualified professors with a large R&D background / experience in the named field and possess deep knowledge on Oceanic Engineering.

They would like to transfer the new knowledge and last results generated by their researchers in UW communications technologies for the greatest private and public benefit. They are ready to optimize the resources of the different stakeholders and maximize the success of cooperation.

They are looking for companies involved with underwater communications in order to reach

Research&Development or technical cooperation agreement. Also Companies who have specific needs of current underwater technologies to develop their main activities.

Potential applications:

- Ocean Floor Observation
- Mapping Sea Floor
- Fishing Strategies
- Subsea Archaeology
- Subsea Noise Study
- Oceanographic Data Collection
- Pollution monitoring/detection
- Off-shore oil/gas field monitoring
- Submarine detection
- Loss treasure discovery

Advantages and Innovations

The key advantages of the R&D are the expertise and experience of the researchers who form the group in the main fields of:

- Underwater Communications Network Protocols. They are available to design self-adaptative/organized, energy efficient and highly reliable Underwater Communications Network protocols maximizing performance in the communications between nodes underwater what is interesting for real-time data transmission and monitoring of large areas.
- Underwater Image and Signal Processing and Analysis. They can build and/or develop specific digital imaging analysis tools for underwater applications. Enhance underwater color video and image, underwater video compression and 3D Image are also some of their key advanced skills. Image targets and context reconnaissance.

Stage of Development

Already on the market

IPR Status

Other

Profile Origin

COSME

Keywords

Technology

01003012	Imaging, Image Processing, Pattern Recognition
01006	Telecommunications, Networking
01006012	Description Image/Video Computing
02009015	Audio / video

Market

01004007	Network test, monitoring and support equipment
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01006001	Defence communications
01006005	Other communications (not elsewhere classified)
08002002	Industrial measurement and sensing equipment
09003001	Engineering services

NACE

A.03.1.1	Marine fishing
A.03.2	Aquaculture
J.61.2	Wireless telecommunications activities
M.71.1.2	Engineering activities and related technical consultancy
M.72.1	Research and experimental development on natural sciences and engineering

Network Contact

Issuing Partner

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Contact Person

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

ICT Industry and Services

Client

Type and Size of Organisation Behind the Profile

Ref: TOES20180604002

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

New partners are expected to be companies who are interested in developing current technologies in Underwater Wireless Communications. New partners/companies who have specific needs in their own activity as Underwater Archaeology, Ocean Floor Observation, Mapping Sea Floor, Fishing Strategies, Subsea Archaeology, Subsea Noise Study, Oceanographic Data Collection, Pollution monitoring/detection, Off-shore oil/gas field monitoring, Submarine detection, Loss treasure discovery. Research&Development or technical cooperation agreement with industrial partners are sought.

Type and Size of Partner Sought

SME 11-50, University, R&D Institution, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Technology Offer

Spanish company offers mobile survey technologies applied to roads for assessment of transport infrastructures.

Summary

A Spanish company working in mobile mapping for road infrastructures offers mobile surveys for generating traffic signs, pavement markings and street lights detailed inventories including its visibility assessment and performance. The company is looking for services and commercial agreements with technical assistance.

Creation Date	21 November 2018
Last Update	24 November 2018
Expiration Date	25 November 2019
Reference	TOES20181121001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/17b278aa-4473-4f96-965e-b19babade489

Details

Description

Spanish technology company which main aim is to develop and exploit the mobile survey technologies has developed a technology that provides an accurate and repeatable measurement of retroreflectivity of pavement markings lines and symbols, through mobile nighttime surveys at traffic speed (it is no necessary close lanes). The system can measure in one pass both lines of the lane the vehicle drives through as well as any symbols located between those lines. Its high accurate GPS and the computer vision algorithms developed can position accurately every type of line and symbols, so that not only an assessment of the retroreflectivity is provided but also a detailed inventory of the pavement marking. This technology can control all factors of influence in pavement marking retroreflectivity, particularly the vehicle dynamics. The accuracy of the system is not affected by the type of driving as its transversal range of measurement is large enough so that any particular driving requirement is avoided.

Furthermore, this solution is the only technology capable of measuring the retroreflectivity of traffic signs with the same accuracy than handheld devices but at traffic speed without having to close lanes to the traffic. In one pass the system can identify and measure every post-mounted or gantry sign up to a three lane carriageway. The technology generates a detailed and complete traffic sign inventory that can be integrated into any Geographic information systems (GIS) or any other road asset management platform. The solution developed by this company provide the retroreflectivity for every colour, sign position (GPS and milestone), sign national

code, sign size and sign offset to the carriageway edge.

Finally, the services provided by this company apply the most advanced mobile mapping technology in order to provide 360° videos of any linear transport infrastructure with high resolution cameras. Thus any relevant aspect of the assets can be visualized without the need of performing any in situ visit to the infrastructure. From the video, and due to the positioning technology of the system, this technology can inventory and geo-reference any asset that is visible from the camera, including its size, geometry and any other attribute that can be assessed from the image.

Advantages and Innovations

The advanced integration in a mobile platform of different technologies allows providing detailed road asset inventories together with the measurement of its retroreflectivity and visibility. This integral solution is an essential tool in order to optimize maintenance costs through the use of objective data in the decision making process.

The main features of this innovative technology can be summarized as follows:

- Mobile system for road assets data acquisition
- Without lane closures
- Traffic speed operation
- Detailed georeferenced inventories (error < 1m)
- Data integration into GIS platforms
- Accurate retroreflectivity measurements
- Flexible data visualization

It is important to mention that this technology has been validated and certified at Texas Transportation institute (United States).

Stage of Development

Already on the market

IPR Status

Patent(s) applied for but not yet granted, Patents granted

Profile Origin

Private (in-house) research

Keywords

Technology

01003012	Imaging, Image Processing, Pattern Recognition
02008006	Traffic Engineering / Control Systems
02010001	Planning and security
09001007	Optical Technology related to measurements
09001009	Sensor Technology related to measurements

Market

01004008	Other data communications
03007002	Other measuring devices

09001007 Other transportation
09003001 Engineering services

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Automotive, Transport and Logistics

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Ref: TOES20181121001

Spain

Partner Sought

Type and Role of Partner Sought

The partner searched is a company involved in the field of road infrastructure, highways agencies and private motorway operators, interested in a commercial agreement with technical assistance or a services agreement.

Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE,251-500, SME 51-250,>500

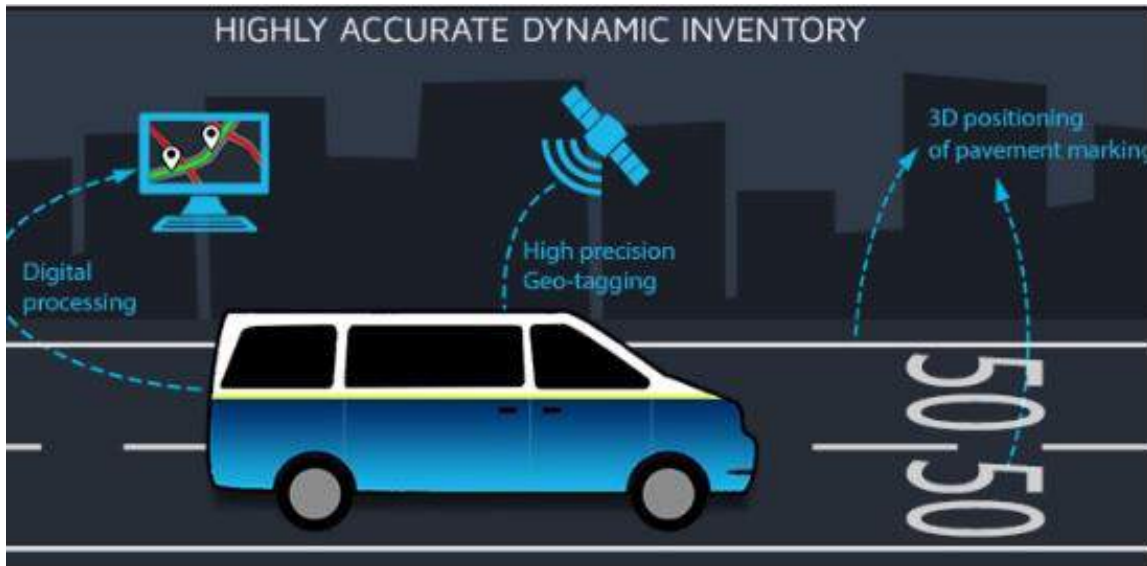
Type of Partnership Considered

Services agreement
Commercial agreement with technical assistance

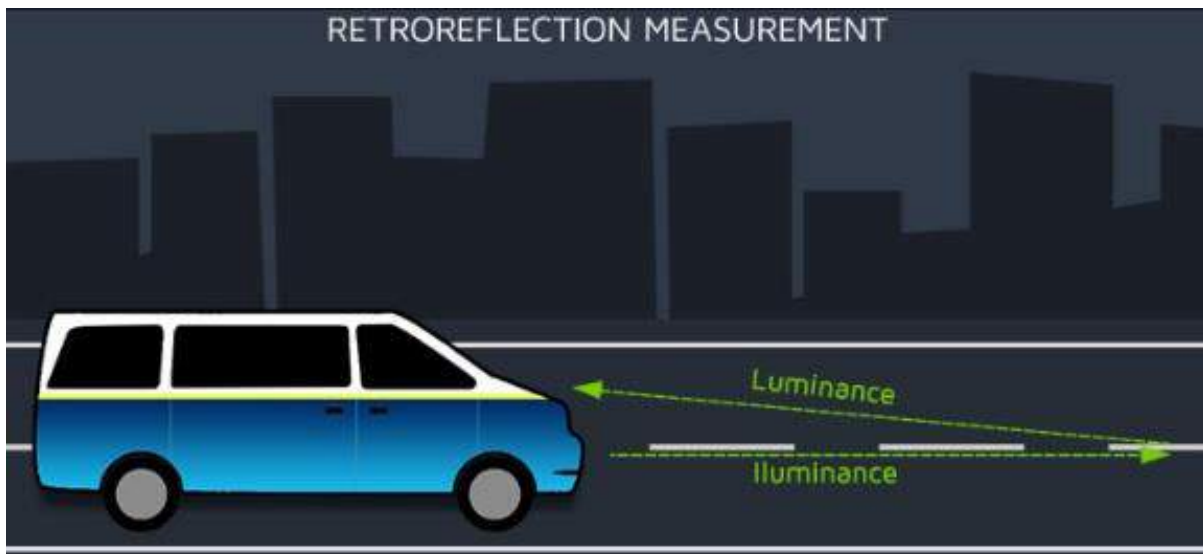
Attachments



Picture 1



Picture 2



Picture 3

Technology Offer

Novel lightning threat indicator easily usable in meteorology, mainly to indicate the lightning threat (e.g. in operation of airports)

Summary

The unique technology takes advantage of information about the increase of electric charge of water droplets in a cloud, which is obtained by measuring the characteristics of electromagnetic (EM) radiation backscattered by a cloud at two wavelengths. The technology is usable in meteorology. An industrial partner for further development and for licensing of the technology is sought. The Slovak institute is looking for partners to cooperate with via license agreement or via financial agreement.

Creation Date	07 November 2018
Last Update	19 November 2018
Expiration Date	20 November 2019
Reference	TOSK20181026001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/15918a52-3de5-441a-95c7-23683442d44e

Details

Description

Nowadays exist several methods for prediction of storms with electric discharges. They mostly use technologies based on evaluation of radar and temperature data. Those that work in the radar mode determine the shape of droplets, which in this case serves as an indicator of presence of an increased amount of electric charge. In essence, it is a detection of particle morphology, as this is related to electric charge. The main disadvantage of these methods is their relation to the particle shape, as this can change significantly with meteorological conditions, leading to uncertainties in the interpretation of the measured data, and also often to large errors or even to the inapplicability of the method under given conditions.

A system has been developed at the Slovak research institute in cooperation with established Slovak university and with US researcher laboratory. The research institute was established in 1953 in order to carry out fundamental and applied research and new developments in the field of civil engineering and architecture. Over a period of more than forty years the institute has developed to address the changing needs of theoretical, numerical and experimental research for professionals, firms and enterprises involved in structural engineering, mechanics, architecture, design, materials, building research and constructions in civil engineering and building science generally.

The advantage of the offered system is that it does not depend on external factors such as wind

shear which has an influence on particle morphology, and thus could indirectly disable a correct interpretation of the measured data. An incorrect evaluation can lead to a false indication of a potential lightning threat.

The new solution is based on the analysis of optical signals of back scattered radiation, which are a demonstration of the electric charge. The developed electric charge monitoring system uses a simple principle in which electrically charged particles with dimensions of at least 100 times smaller than the wavelength of the radar signal scatter electromagnetic radiation with altered efficiency. Due to small droplet dimensions, this method is advantageous for radars operating in the microwave region, i.e. at wavelengths of several millimetres or more. The backscatter intensity measured by the detector is essentially a superposition of intensities of scattered radiation generated by all the droplets visible in the field of view of the device.

The principle of function of this technology could be seen at the picture attached in this technology offer. A source produces EM radiation of two frequencies that is directed toward a cloud of water droplets. The backscattered light from these droplets is collected by the receiver. The individual intensity components of the two wavelengths are separated in software of within the electronics. The ratio of these two intensities can be monitored.

By measuring the backscatter signal EM radiation at two wavelengths, it is found that the ratio of these two signals remains constant in the case of conventional aqueous cloud, regardless of size of number of droplets. However, from the moment at which the charging of droplets starts to occur to the moment at which there is a potential threat of lightning, the ratio of signals of scattered radiation will increase.

The research institute is looking for partners to cooperate with via license agreement (they are looking for licensees) or via financial agreement (an investor is sought).

Advantages and Innovations

Competitive advantage:

- Prediction capability independent of droplet morphology (the novel technology is based on optical properties),
- Prediction capability independent of external factors such as wind shear.

Stage of Development

Concept stage

Comments Regarding Stage of Development

TRL 2 - technology concept and/or application formulated.

IPR Status

Patent(s) applied for but not yet granted, Patents granted

Comment Regarding IPR status

- Granted European patent validated in Germany and France,
- Granted Slovak patent,
- Filed United States patent application.

Profile Origin

Other

Keywords

Technology

Ref: TOSK20181026001

02011001 Aeronautical technology / Avionics
05002001 Biosensor
10001003 Fire Safety Technology

Market

09001001 Airlines

NACE

F.43.9.9 Other specialised construction activities n.e.c.
M.71.1.1 Architectural activities
M.71.1.2 Engineering activities and related technical consultancy

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1953

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Slovak
Czech

Client Country

Slovakia

Partner Sought

Type and Role of Partner Sought

Type: company (industry)

Field of activity: no preference. The technology is usable e.g. in applied meteorology, mainly the use of information about the state of electric charge of water droplets to indicate the lightning threat for various applications (e.g. in operation of airports).

Role: License agreement - the Slovak research institute is looking for licensees, ideally for industrial partner for further development and for licensing the technology.

Financial agreement - an investor into this technology is sought.

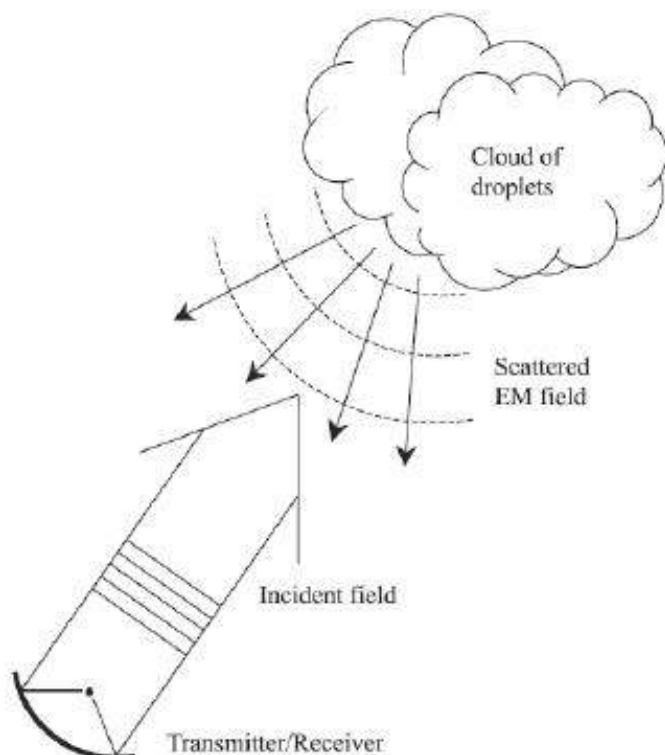
Type and Size of Partner Sought

SME 11-50, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

License agreement
Financial agreement

Attachments



novel lightning threat indicator

Technology Offer

Integrated smart road system of autonomous e-mobility for metropolitan city

Summary

Italian engineering start-up developed and patented a mobility system based on electric vehicles instead of endothermic cars, as solution of roads car congestion of metropolitan city. The system is equipped with special devices and light infrastructures easy to implement. Manufacturers of electric vehicles, companies involved in the smart road/smart city functions, city government are partners sought for technical cooperation or commercial agreement with technical assistance.

Creation Date	15 November 2018
Last Update	26 November 2018
Expiration Date	27 November 2019
Reference	TOIT20181016001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1c024af0-ee8b-4581-8168-a982561de7bd

Details

Description

The Italian company works in the fields of smart mobility engineering. The "Integrated suspended e-mobility smart road system" developed allows simple electric vehicles to travel along a suspended road like the one used for the chairlifts. It is an alternative solution to daily routes on the road network used by commuters, from home to the city and back: the idea is to make vehicles travel on another level, suspended from the ground, different from that of the road network. The system, covered by an international patent for the whole European area (38 countries), focuses on innovative, alternative mobility and integration of the road network. The system includes a light infrastructure with suspended cables, such as a chairlift, which is the direct suspension from the ground, with departure and arrival stations, to which individual electric vehicles are hooked for extra-urban transfers between cities and satellite neighborhoods. It also provides parking lots between traditional and electric car-sharing vehicles, arranged along the high traffic axes outside the city belt, which can be used by drivers coming from other cities. The suspended route along the main traffic routes, developing in a straight line, reduces the distances. It avoids the critical nodes of the road network that cause traffic jams (intersections, traffic lights, bottlenecks, curves) with a noticeable decrease in travel time and obviously with reduction of CO2 emissions, fine dust and noise pollution. In addition, the suspended route is an absolutely safe means, as the driver is exempt from driving the vehicle throughout the entire journey. The management of the speed is entrusted to a central remote control system that manages the speed and distance of the vehicles and optimizes the flow. The suspended route, for stages in a straight line of 5 km, does not pass over the buildings but above the free spaces not built (green, parking, roads, etc.) between the two departure /

arrival stations located at the edge of the city and the connected neighborhoods, at a minimum regulation height from the ground of 5 meters. Technically, the system is easy to implement, even in a short time, thanks to the use of equipments (vehicles, cableway, rope tensors, etc.) and devices (electric motors, electronic control units, distance detectors, etc.) existing in production on the market. The mobility system can be implemented in all the cities congested by private car traffic, mainly coming from other medium-distance satellite cities or districts with one or more stretches. It is an ideal solution for converting the daily flow of endothermic private cars into electric vehicles that, by drawing on public electricity during the journey, can use the energy charge of their batteries in urban routes. Sustainability thanks to low energy consumption, road safety, limited environmental impact deriving from the reversibility of the intervention, simplified adaptability to the orographic conditions of the terrain, limited soil dispersion, eco-compatibility of the materials used (steel, ropes). The solution thus allows the transit of the historical centers and sensitive areas of cities and minor centers exclusively to electric vehicles, with zero emissions and re-naturalization of urban spaces.

The company seeks partners interested in applying and integrating the proposed solution in the general plan of the city.

They propose technical cooperation agreement and/or commercial agreement with technical assistance.

A possible partner could be municipalities and companies engaged in civil infrastructures for smart city / smart road or company operating in the electric mobility sectors.

Advantages and Innovations

The technology is an alternative solution to daily routes on the road network used by commuters, from home to the city and back.

The main advantages of e-mobility system is able to provide most effective solution of the daily flow of cars in terms of :

- minimize the environmental impact, particularly in urban areas;
- improve energy saving
- enable end-users to charge the electric car.
- reduction of CO2 emissions,
- fine dust and noise pollution.

Stage of Development

Concept stage

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

PCT Request.

Profile Origin

Private (in-house) research

Keywords

Technology

02008002	Intermodal Transport
02008005	Road Transport

04005012 Waste to energy - other

Market

08003007 Other industrial equipment and machinery

NACE

C.32.9.9 Other manufacturing n.e.c.

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Nano- and Microtechnologies

Client

Type and Size of Organisation Behind the Profile

Inventor

Year Established

2014

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Experience Comments

The company operates in the fields of sustainable mobility, integrated mobility system: independent electric urban and suburban transport by means suspended route and overland

Languages Spoken

English
Italian

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

The company is seeking partners such as 1) manufacturers of electric vehicles, 2) companies involved in the smart road/smart city functions, 3) city government for technical cooperation agreement and/or commercial agreement with technical assistance
The partner has to be involved in applying and integrating the proposed solution in the general plan of the city, e.g. municipalities and companies engaged in civil infrastructures for smart city / smart road or company operating in the electric mobility sectors.

Type and Size of Partner Sought

251-500

Type of Partnership Considered

Commercial agreement with technical assistance
Technical cooperation agreement

Attachments



null

Technology Offer

Integrated system of autonomous e-mobility for urban/extra-urban cycle smart city

Summary

Italian smart city engineering start-up designed an integrated e-mobility system to solve road congestion in cities. It's based on electric vehicles equipped with special devices and light infrastructures which allows autonomous driving and solves the limit of electric autonomy of vehicles battery. Partners sought are companies manufacturing electric vehicles and/or engaged in smart road civil infrastructures for technical cooperation agreement or commercial agreement with technical assistance.

Creation Date	15 November 2018
Last Update	26 November 2018
Expiration Date	27 November 2019
Reference	TOIT20181016003
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/796dd1f1-7b54-434f-a44b-578ab37efadc

Details

Description

An Italian companies working in the field of engineering has designed an innovative e-mobility system. It, consists of an integrated technology of electric-powered mobility with dedicated lanes powered by an overhead power line - urban / extra-urban cycle. The mobility is realized with the use of simple electric vehicles, for private and public transport, equipped with some contact devices that allow the power supply from an overhead power line both during the movement in special dedicated lanes, and during the stop in equipped areas, in order to allow the traction to be independent from the battery charge and at the same time to increase their autonomy for normal road routes. The system ensures full energy autonomy and the drastic reduction to the minimum necessary of the number of batteries supplied in the vehicle in order to minimize the masses and improve its energy efficiency. The technology has various power supply and contact solutions to adapt them in all urban and suburban contexts; as a consequence, electric vehicles can be equipped with one or more electrical contact devices so as to allow them to be fed from the chosen line. In addition, the power supply system is integrated with various devices that interface with a remote management and control center, which allows autonomous driving in maximum safety, as it is not managed by satellite geo-location, and the speeding of vehicle flows through the placement in the intersections of "intelligent" traffic lights. The application, unlike the fixed route trams for public transport, is flexible and allows free movement, without constraints of guide rails or fixed connections to the air network of simple electric vehicles. It is a sustainable system as it reduces consumption, atmospheric and acoustic pollution, and costs compared to existing mobility systems. The system is consistent with the EU's policy on the

environment, mobility and energy for CO2 reduction.

The company seeks partner interested in applying and integrating the proposed solution in the general plan of the city or companies manufacturing electric vehicles and/or engaged in civil infrastructures for the smart road / smart city functions. They propose technical cooperation agreement and/or commercial agreement with technical assistance.

Advantages and Innovations

The advantages are to provide innovative solution to the congestion of the cities caused by the cars compared to existing mobility systems.

The technology gives effective solution of the e-mobility in terms of:

- minimizing the environmental impact, particularly in urban areas
- improving energy saving
- solving the limit of autonomy of electric vehicle batteries
- sustainability and costs
- reducing consumption
- less atmospheric and acoustic pollution

Stage of Development

Concept stage

IPR Status

Patents granted

Comment Regarding IPR status

The system is object of patent protection : N.102015000035193

Profile Origin

Private (in-house) research

Keywords

Technology

02008002	Intermodal Transport
02008005	Road Transport
04005012	Waste to energy - other

Market

08003007	Other industrial equipment and machinery
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NACE

C.32.9.9	Other manufacturing n.e.c.
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Network Contact

Issuing Partner

Ref: TOIT20181016003

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Intelligent Energy

Client

Type and Size of Organisation Behind the Profile

Inventor

Year Established

2015

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Experience Comments

The company operates in the fields of sustainable mobility, integrated mobility system: independent electric urban and suburban transport

Languages Spoken

English
Italian

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

The company seeks partner involved in applying and integrating the proposed solution in the general plan of the city or companies manufacturing electric vehicles and/or engaged in civil infrastructures for the smart road / smart city functions.

A possible partner could be industrial and/or governmental partners e.g. municipalities, companies involved in the civil infrastructures for smart city and/or industrial company operating in the electric mobility.

They propose technical cooperation agreement and/or commercial agreement with technical assistance.

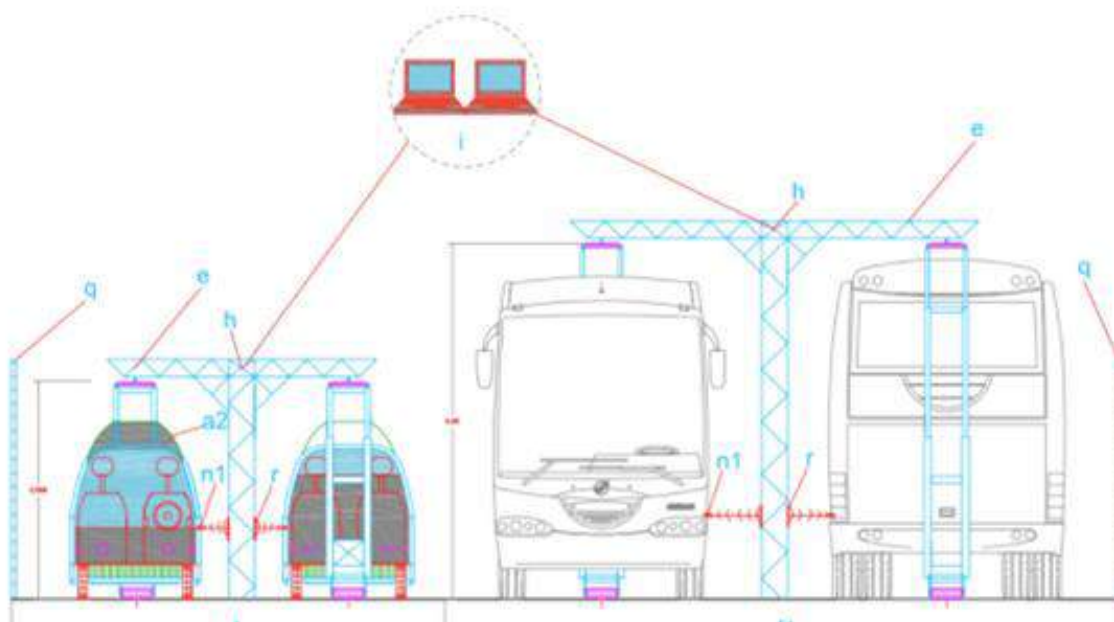
Type and Size of Partner Sought

SME 11-50, R&D Institution, SME <10, SME 51-250

Type of Partnership Considered

Commercial agreement with technical assistance
Technical cooperation agreement

Attachments



Technology Offer

Remote structural health monitoring of civil infrastructure

Summary

An Italian research center offers a patented technique based on mid infrared digital holography, enabling real-time remote monitoring of displacements/deformations/vibrations of large size structures. It provides a precise estimate of the amplitude and frequency of the natural oscillation of the structure, establishing its functionality and health status. A company to turn the prototype into a product and bring it to the market is searched, offering manufacturing and technology agreement.

Creation Date	16 October 2018
Last Update	13 November 2018
Expiration Date	14 November 2019
Reference	TOIT20181016004
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/63f5172b-f913-4d02-a274-abad0a5ada27

Details

Description

The dynamic characterization of a large size structure (building, wall, bridge, ...) implies the knowledge of its fundamental oscillation modes and provides crucial information on the elastic response of the structure to seismic events, environmental stress (wind, rain and natural calamities) or anthropogenic activities (rail or vehicular traffic, underground works, etc.). Currently, such a characterization is obtained by means of seismometers, synthetic aperture radar or laser doppler vibrometers. Such devices, however, have serious drawbacks which prevent their application at a large scale.

The Italian research center proposes a method which overcomes these critical issues and paves the way to systematic seismic vulnerability experimental assessment.

The system relates to a technology based on Mid Infrared Digital Holography (MIR DH), an interferometric imaging technique providing amplitude and phase information on the wavefront scattered by an object irradiated with IR coherent radiation. In DH, the interferometric pattern (hologram) resulting from the superposition of the radiation scattered by the target and an appropriate reference beam is recorded on a suitable digital recording device so that it can be numerically processed to extract the wave-front information. The phase information, in particular, is related to the optical path length of the laser and, consequently, to the target displacements. With respect to visible DH, Infrared DH inherently benefits from wavelength scaling of both mechanical stability requirements and linear field of view, thus proving to be perfectly suited for large size structures monitoring.

The system has been patented, filing an Italian Patent and an International Patent. The two applicants are the Italian research centre and an important Italian University.

A prototype employing a compact radiofrequency CO2 laser at 10.6 μm , a thermal focal plane array, IR optics and electronic/software components for device control and data processing was developed. Such a semi-portable device was positively tested in the laboratory and in the field to measure the oscillation modes of a four-story building. The comparison with seismometric measurements has provided very promising results for the use of the holographic method in the framework of structural monitoring.

The research center is looking for an industrial partner that, with their assistance, will develop an engineered and certified commercial device (equipped with user friendly software and dedicated electronic circuitry) with the same technical specifications as the advanced prototype but optimized for its compactness, robustness and functionality.

The commercial device will be sold/rent to Engineering Societies dedicated to seismic vulnerability assessment or industrial vibration monitoring.

A manufacturing agreement and a technical cooperation agreement will be defined to develop a "commercial" product based on the offered technology.

Advantages and Innovations

The infrared holographic technique allows to measure the amplitude and frequency of the oscillation modes of the structures from remote, in an extremely short time (few minutes), with a limited use of human resources and with a sensitivity of the order of the tenth of a micron in the determination of the oscillation amplitude.

This simplified measurement procedure reflects directly into a drastic reduction in costs and measurement times thus making it possible to monitor all buildings and bridges in entire urban areas.

The holographic technique also has clear advantages when it is necessary to evaluate the conditions of damaged structures as it allows to carry out surveys without accessing the structure and, therefore, in absolute safety.

With this technique it is also possible to simultaneously investigate extended surfaces of the structure, obtaining a real map of the deformations/displacements of the surface under examination.

Finally, the technique is also able to follow drift motions of the examined structure.

No real competitor is currently present on the market.

The IP and know-how could be easily transferred to a third part with minimum expertise in the field of optical measurement/imaging.

Stage of Development

Field tested/evaluated

IPR Status

Patents granted

Comment Regarding IPR status

An Italian Patent and an International Patent were filed

Both with two applicants: the Italian research centre and an important Italian University

Profile Origin

Private (in-house) research

Ref: TOIT20181016004

Keywords

Technology

01001002 Digital Systems, Digital Representation
01003012 Imaging, Image Processing, Pattern Recognition
02009018 Measurement devices

Market

09007004 Engineering and consulting services related to construction

NACE

M.72.1.9 Other research and experimental development on natural sciences and engineering

Network Contact

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Open for EOI : **Yes**

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1923

Ref: TOIT20181016004

Turnover

>500M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

A small or medium company with optical, mechanical and electronic expertise is sought to realize the final engineered and certified commercial device.

Type and Size of Partner Sought

SME 11-50,SME <10,SME 51-250

Type of Partnership Considered

Manufacturing agreement
Technical cooperation agreement

Technology Offer

Handheld and stationary gas leak detectors for quick and highly-selective detection of gases like methane, propane, carbon dioxide, hydrogen, ammonia and refrigerants for applications in buildings, installations, automotive, energy and safety plants.

Summary

A German SME specialized in advanced ceramic sensor technologies offers a wide range of quick and highly-selective gas leak detectors as handheld and stationary versions, based on advanced ceramic Platinum thin-film technology. The devices can be used for gas detection in buildings, pipelines, installations, automotive, energy, environment and safety plants. Seeking industrial companies and end-users with interest in commercial agreements with technical assistance.

Creation Date	08 November 2018
Last Update	15 November 2018
Expiration Date	16 November 2019
Reference	TODE20181107001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/38cf3bc1-a059-4fa3-b00a-bb9306d0c367

Details

Description

Hazardous gas leaks occur in most industrial and civil plants, vehicles, installations and buildings and require quick reactions. For safety reasons the responsiveness and accuracy of the gas detection is very important and needs reliable control and measurement via sensor technologies.

The innovative German SME is specialized in patented ceramic sensor technologies and offers a wide range of quick and highly-selective gas leak detectors, based on advanced ceramic Platinum (Pt) thin-film technology. The handheld and stationary gas leak detectors are selective for methane (CH₄), propane (C₃H₈), carbon dioxide (CO₂), hydrogen (H₂), ammonia (NH₃) and refrigerants to identify potentially hazardous gas leaks. The detectors can be used for a wide range of applications, such as in industrial plants, refineries, vehicles, pharma and cosmetics manufacturing, fumigation facilities, paper pulp mills, aircraft and shipbuilding facilities, hazmat operations, waste-water treatment facilities, indoor air quality testing and homes.

Main fields of application:

- building industry: pipeline construction and service for gas leak search and detection;
- installation, maintenance, service of systems for gas, air conditioning, ventilation etc. for gas leak detection;
- automotive industry and services: gas leak search and detection for air conditioning systems, gas vehicles etc.;
- energy engineering and plants;
- environmental technology;
- safety engineering.

Seeking industrial companies and end-users with interest in commercial agreements with technical assistance as follows:

- The company offers individual support to transfer the relevant precision gas measuring technology into customized solutions as it is essential for each specific highly-precise application to fulfill all user requirements.
- Providing additional support service for all above application fields according to the user requirements.

The company is also looking for distribution partners and regional representatives, wholesalers, importers.

Advantages and Innovations

- highly selective and highly sensitive devices
- quick response time (depending on gas type)
- automatic measuring range change-over
- automatic zero setting on air after switch on
- handheld, compact and robust metal case
- microprocessor controlled devices
- integrated rechargeable NiMH battery pack included
- with APEX certification (on request)

Stage of Development

Already on the market

IPR Status

Patents granted, Trade Marks

Comment Regarding IPR status

Many Patents; granted for DE and EU

Profile Origin

Private (in-house) research

Keywords

Technology

01003023	Environmental and Biometrics Sensors, Actuators
02007003	Ceramic Materials and Powders
02009009	Sensors for cars and transport

09001009 Sensor Technology related to measurements

Market

06009 Energy Distribution
09001005 Motor vehicles, transportation equipment and parts
09007004 Engineering and consulting services related to construction
09008003 Gas transmission and distribution

NACE

C.27.9.0 Manufacture of other electrical equipment

Network Contact

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Environment
Nano- and Microtechnologies
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

Industry SME 50-249

Year Established

1991

Turnover

10 - 20M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Seeking industrial companies and end-users with interest in commercial agreements with technical assistance in:

- building industry: pipeline construction and service for gas leak search/detection;
- installation, maintenance, service of systems for gas, air conditioning, ventilation etc.
- automotive industry and services: gas leak search/ detection on air conditioning systems, gas vehicles etc.
- energy engineering/plants; environmental technology; safety engineering;

a) The company offers individual support to transfer the relevant precision gas measuring technology into customized solutions as it is essential for each specific highly-precise application to fulfill all user requirements.

b) Providing additional support service for such application fields in automotive, transport and logistics, biotech, pharma/cosmetics, energy, environment, industrial equipment and machinery, space/aerospace to fulfill user requirements.

Looking also for distribution partners, regional representatives, wholesalers, importers.

Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Technical cooperation agreement

Technology Offer

Access to information contained in motor vehicles by implementation of optical wireless

Summary

A Spanish SME specialized in visible light communications technology has a solution for accessing information available in motor vehicles. This information can be used for performing preventative diagnostic tasks, improve the security of communications detecting malfunctioning in motor vehicles earlier, and using to control the access of vehicles to specific facilities. The company seeks technical cooperation agreement and license agreement to implement the solution in the automotive industry.

Creation Date	26 October 2018
Last Update	19 November 2018
Expiration Date	20 November 2019
Reference	TOES20180814001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/87641e90-0cb0-42af-921e-2d579d7f1855

Details

Description

The Spanish SME has a solid background in visible light communications technology (VLC). The company works in the field of the telecommunication, home automation and optoelectronics. It was beneficiary of H2020 SME instrument phase 1; it is currently running a project under H2020 SME instrument phase 2 and is involved in international cooperation. The devices based on visible LED (light-emitting diode) lamps combine very low power consumption with an extremely long operational life, maintaining the same chromaticity without significant changes. LED lamps can be also used as communications emitters without losing their main functionality, illumination sources, with application in homes, traffic lights, hospitals, hotels, etc.

The company has developed a system for the automotive sector based on VLC technology and vehicle-to-everything (V2X). It access and manages information stored in motor vehicles. This information can be used with different purposes, for example:

- 1) To perform preventative diagnostic and detect faults earlier. Thanks to this communication solution, it is possible to perform a non-intrusive maintenance of any vehicle, which allows an online connection of the vehicle with their maintenance responsible. The solution improves the vehicle safety, reduces the amount of time in the repair shops and improves road safety, preventing accidents.
- 2) To control the access of vehicles to specific facilities (garages, factories, etc.). Thanks to the use of VLC technology, the solution transmits the information in a secure way. The user can open his garage door sending a code through the led headlights.

The system comprises a control unit for:

- capturing information of the vehicle from at least one electronic component;
- generating a data message from this information;
- transmitting this data by means of visible optical communication through at least one light of the vehicle.

The technology is patent. The company is interested in technical cooperation agreements with automotive industry to implement the solution in new or existing products, as a manufacturer's car headlight.

The company offers as well license agreements to industrial partners interested in developing the system by themselves

Advantages and Innovations

With this technology, the vehicle lights are employed as wireless communication device. The modifications needed in the vehicle are minimal, without the need to incorporate any additional communication device in the simplest version. The data are sent through the vehicle lights without any external control system.

The optical communication employed is the securest mean of communication. It is difficult to intercept the light signals, intentionally or accidentally. On the other hand, the optical communication works in the presence of frequency inhibitors, increasingly common in urban environments, which brings an advantage comparing to the transmission of data by radiofrequency.

Safety in cars is a sensitive task, not only for saving people's lives but for ensuring the security of the link among the vehicle and the Cloud: a new Concept of Internet of Things with vehicles thanks to our optical middleware.

During the last 9 months the company has been validating the product in a national accelerator and in contact with other companies in the sector.

Stage of Development

Available for demonstration

IPR Status

Patents granted

Comment Regarding IPR status

European patent
United States patent

Profile Origin

Private (in-house) research

Keywords

Technology

01001001	Automation, Robotics Control Systems
01004003	Applications for Transport and Logistics
01006003	Mobile Communications
02009004	Road Vehicles

Market

01006004 Communications services
02006004 Data processing, analysis and input services
03004003 Other electronics related equipment

NACE

J.63.1.1 Data processing, hosting and related activities

Network Contact

Issuing Partner

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Automotive, Transport and Logistics

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

2012

Already Engaged in Trans-National Cooperation

Ref: TOES20180814001

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

Type of partner sought: automotive industry., led headlight manufacturer

- Specific area of activity: ICT, road vehicles, transport.

- Task to be performed by the partner sought: The company is interested in technical cooperation agreements with automotive industry / industry 4.0/ Vehicle-to-everything (V2X) to implement the technology in new or existing products.

The company offers as well license agreements to industrial partners interested in developing the system by themselves.

Type and Size of Partner Sought

SME 11-50, University, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

License agreement
Technical cooperation agreement

Attachments



null

Research & Development Request

H2020: Operating companies dealing with ports, boats, rivers, channels or beaches monitoring are sought for use cases implementation in the topic MG-2-8-2019

Summary

A French engineering company with high expertise in drone systems is developing a proposal for the H2020 topic MG-2-8-2019. The project is aimed at developing new drone technologies to increase safety, security and efficiency of maritime transport. To complete the consortium, operating companies active in ports, boats, rivers, channels or beaches surveillance are sought to implement use cases within the project.

Creation Date	04 December 2018
Last Update	06 December 2018
Expiration Date	10 January 2019
Reference	RDFR20181126001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/e3e28e0a-48d1-4de5-9468-7098bf9dc2e3

Details

Description

The drone market is the fastest growing in aerospace, enabling innovative services for the public and the private sector, small and big companies. Increasing the services provided by drones can contribute to underpin safety and security in transport.

The French company's proposal will :

- Develop and test technologies, operational and business models for the application of drones to increase safety, security, public acceptance and efficiency of transport, including search and rescue applications
- and
- Explore and develop innovative technologies and sustainable business models for pilot services

The proposal focuses on water transport and includes several use-cases which could be deployed in Europe. They will also demonstrate how the planned services will support and speed up regulatory adaptation, certification and standards validation.

Last, the actions planned in the proposal will improve synergies with EGNOS, Galileo and Copernicus.

To complete its consortium, the French company is looking for public or private companies operating in the following areas:

- Port, river or channel operations
- Boat operations
- Beach surveillance

The sought partners will implement the use cases in their area of activity. The French company has already some use cases in mind, but there will be open discussions with the partners about their relevance.

The French company could be interested in use cases dealing with surface transport, provided that a consistency with other use cases can be demonstrated. The proposal will be structured according to the selected use cases.

Deadline for EOI : 14/12/2018

Deadline for the call: 16/01/2019 (1st stage) and 12/09/2019 (2nd stage)

Stage of Development

Concept stage

Keywords

Technology

02008008	Water Transport
10004008	Water Resources Management
10004009	Marine Environment

Market

09001006	Airfield and other transportation services
09001007	Other transportation

NACE

M.71.1.2	Engineering activities and related technical consultancy
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Network Contact

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Open for EOI : **Yes**

Dissemination

Relevant Sector Groups

Aeronautics, Space and Dual-Use Technologies

Client

Type and Size of Organisation Behind the Profile

Industry >500

Year Established

1970

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

French

Client Country

France

Partner Sought

Type and Role of Partner Sought

Type of partners sought: public or private operating companies dealing with:

- Ports, rivers or channels or
- Boats or
- Beach surveillance

Role of partners sought: partners will implement use cases in their sector altogether with the support of the French company and other partners involved in the project for the outcomes analysis.

Type and Size of Partner Sought

SME 11-50, SME <10, >500 MNE, 251-500, SME 51-250, >500

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

H2020

Call title and identifier

Call: H2020-MG-2018-2019-2020

Topic: MG-2-8-2019 "Innovative applications of drones for ensuring safety in transport"

Submission and evaluation scheme

Two-stage evaluation scheme

Coordinator Required

No

Deadline for EOI

10 Jan 2019

Deadline of the Call

16 Jan 2019

Weblink to the Call

<https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/mg-2-8-2019.html>