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ANDALUCÍA

Boletín nº 154 de Oportunidades de Cooperación:

Nanotecnologías, Tecnologías de Producción, Construcción, Materiales, Transporte

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Agencia Andaluza del Conocimiento
CONSEJERÍA DE ECONOMÍA Y CONOCIMIENTO

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TECHNOLOGY OFFERS

- An Italian company offers a licence agreement for services for concrete corrosion monitoring and cathodic protection of reinforced concrete...
- Licensee for short-fibre geopolymer-based composites reinforced with nanoparticles is sought
- Partners sought for a sound absorbing material with nanofibrous resonant membrane

MATERIALES

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- “German research institute seeks industrial partners working on redox-flow battery to join its H2020 proposal

TRANSPORTE

TECHNOLOGY OFFERS

- A Korean company offers compact, lightweight, and high energy density hydrogen generators and fuel cell systems for UAV (Unmanned Aerial Vehicle), drone, robot etc

TECHNOLOGY REQUESTS

- A Turkish technology company expert on smart and secure cities seeks specific drone technology

1.
NANOTECNOLOGÍA

Modified titanium alloys for medical application

Summary

Ukrainian company offers the technology to obtain titanium alloys with improved mechanical and exploration characteristics and refined structure without changes in chemical composition. This institution has made a lot of developments in field of medical application of titanium. Client is looking for co-producers or investors. Joint venture and license agreements are the types of proposed partnership

Creation Date	30 August 2016
Last Update	23 April 2017
Expiration Date	23 April 2018
Reference	TOUA20160830002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/313366c4-1a33-47cb-921e-ddefb929bf4b

Details

Description

Titanium is well-known material that is applied in medical industry due to its biological compatibility. However, pure titanium can't be used as the material for a wide range of medical areas because of insufficient strength.
Typically, Ti strength is increased by alloying, e.g. with 6% V and 4% Al (Grade 5). Anyhow, for medical application, this alloy has to be coated to prevent harmful effects of V on health.
Another option would be to increase strength of pure Ti by grain refinement, which is not a simple goal to achieve by existing technologies. Therefore, new technology is developed, comprising
severe plastic deformation through twist extrusion, reaching even higher strength than Grade 5 alloy.
Proposed technology allows to increase mechanical characteristics of pure titanium without alloying and refusing from coatings. This technology is based on twist extrusion method which is one of the most perspective methods of severe plastic deformation. Ukrainian company is looking for investor who can support development of modified titanium alloys for medical application or co-producer who is interested in implementation of technology into production and its improving.

Advantages and Innovations

Unlike other methods, twist extrusion allows producing of modified titanium which is 3 times cheaper, could be easily integrated into existent productive chains and does not need special equipment.
- Less material usage in comparison with other technologies in this field
- Ability for integration into standard production
- Wide range of material shapes

Stage of Development

Under development/lab tested

IPR Status

Patents granted

Profile Origin

National or Regional R&D programme

Keywords

Technology

02002014	Extrusion
02007024	Nanomaterials

Market

05005015	Orthopaedics
05005017	Dentistry / Odontology, Stomatology

NACE

Q.86.2.3	Dental practice activities

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

Phone Number

+34 955 00 74 78

Email

mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group

Healthcare

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1965

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Russian

Client Country

Ukraine

Partner Sought

Type and Role of Partner Sought

Ukrainian research institution is looking for investors who are interested in supporting of development of modified titanium alloys for medical application or co-producer who is interested in implementation in production and improving of technology.
Joint venture
Type: venture capital/ investment company
Role: business partner/ investor
Activity: Investments in research and developments and market providing
License agreement
Type: producer of medical implants or materials for them
Role: license purchaser
Activity: manufacturing of products based on proposed technology

Type and Size of Partner Sought

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

Type of Partnership Considered

Financial agreement

Innovative man-made fibre development from lab to pilot scale

Summary

A German university offers processes for corporate research in the field of innovative man-made fibres. They cover the whole process chain from polymers to prototypes or products from lab to pilot scale. Outstanding is the pilot high temperature bicomponent spin line which also allows spinning of bicomponent fibres from high temperature polymers. Partners are sought from industry and university for commercial agreement with technical assistance, technical and research co-operation agreements.

Creation Date	30 March 2017
Last Update	20 April 2017
Expiration Date	20 April 2018
Reference	TODE20170316001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a8f99487-6a7d-4cc3-878e-251f22ad73a9

Details

Description

Man-made fibres made of different polymers, especially from high temperature polymers, can be used for high tech materials like textiles for clothing and for high performance applications as well as for reinforced materials. Especially the development of high performance fibres requires special equipment and know-how.

The department “man-made fibres” of a German university possesses this equipment and know-how to develop functional fibres, reinforcing fibres and new technologies regarding fibre formation, analytics and processing. The scientists and engineers investigate new compounds from all kinds of polymers, blends and additives to address the customers' needs. The institute offers the whole research value chain for the development of new textiles. That conducts
- material testing (e.g. polymer analytics (thermal, chemical), small angle x-ray diffraction (SAXD) analysis,
- preparation of materials before spinning: drying, compounding, filling and blending
- feasibility studies of spinability, process development (e.g. efficiency analysis), investigation of parameters for compounding and fibre production according to desired fibre properties
- simulation (including computational fluid dynamics), process monitoring (high speed video, particle image velocimetry (PIV))
- melt spinning (monofilament, multifilament, bicomponent, shaped fibres) of convenient (e.g. PP, PE, PA, PAN) and high temperature polymers (e.g. PEEK, PES) as well as glass and basalt ceramic fibre spinning, fibre stabilization and carbonization
-upscaling of fibre spinning processes from lab scale to pilot scale

Selected examples of innovative, outstanding research are: development of fibres from

biopolymers, spinning of fibres from CO2, development of aerogel fibres from cellulose (e.g. aerospace application), development of fibres with electrically conductive and/or sensory properties (e.g. health and condition monitoring). Partners from research and industry are sought for commercial agreement with technical assistance as well as for technical and research co-operation agreements and contribution to national and european research projects.

Advantages and Innovations

• Research and development along the whole fibre and textile process chain from lab to pilot scale (Micro Extrusion Unit 10 g/h throughput < 200 m/min. winding speed up to Bicomponent, High-Temp. Spinning Line 30 kg/h throughput and 6000 m/min winding speed)
• Competitive lead by development of highly innovative fibres and processes (melt and solution spinning, monofilament, multifilament, bicomponent spinning)
• Experience in testing of fibre materials (microscopy, thermal analysis, Capillary Rheometer, Wide Angle X-Ray Diffraction (WAXD), Karl-Fischer-Titration) as well as fibres and textiles
• Fast and flexible production and prototype preparation development of man-made fibres and textiles (experienced in rapid prototyping)
• In contrast to other textile institutes they can cover with their know-how and labs the whole textile chain from compound to the fabric or to light weight construction composite

Stage of Development

Under development/lab tested

Comments Regarding Stage of Development

The German university is also able to develop prototypes and products from all stages from concept stage over lab and field tested and evaluated as well as available for demonstration.

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Keywords

Technology

02007018	Advanced Textile Materials
02007019	Lightweight materials
02007020	Biobased materials
02007024	Nanomaterials
09001002	Analyses / Test Facilities and Methods

Market

07004001	Clothing, shoes and accessories (including jewellery)
08001004	Fibre-reinforced (plastic) composites
08001018	Polymer (plastics) materials
08003005	Other industrial machinery for textile, paper & other industries
09004003	Textiles (synthetic and natural)

NACE

C.13.1.0	Preparation and spinning of textile fibres
C.13.9.6	Manufacture of other technical and industrial textiles
C.20.6.0	Manufacture of man-made fibres
M.72.1.9	Other research and experimental development on natural sciences and engineering

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

Phone Number

+34 955 00 74 78

Email

mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group

Nano- and Microtechnologies

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1934

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Dutch
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Industry (contract research) and research consortia from industry and research institutes (contribution to national and European research projects)
Area of activity of partner: Textile producer, Textile mechanical engineer, composite producer, smart industry, additive producer
Tasks to be performed: contract research along the whole man-made fibre process chain, fibre up scaling into industrial scale

The instute is able and experienced to become a coordinator of EU projects. The institute is open for agreements related to comercial agreements with technical assitstance, research cooperation and technical cooperation agreements.

Type and Size of Partner Sought

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

Type of Partnership Considered

Commercial agreement with technical assistance
Technical cooperation agreement
Research cooperation agreement

A UK based start-up seeks partners to run pilots of scalable, low cost technology of a high throughput microfluidic liquid-particle processing for bioproduction dewatering and environmental sample preparation

Summary

A UK based start-up is providing liquid-particle processing technology which can be used in a range of different applications from downstream processing of bioreactor content such as algae dewatering, through environmental sample preparation and testing, portable water treatment, and ballast water filtration and drinking water monitoring. The start-up seeks for partnerships under the research cooperation agreement or the technical cooperation agreement to set up pilots of their technology.

Creation Date	17 March 2017
Last Update	10 April 2017
Expiration Date	10 April 2018
Reference	TOUK20170316002
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/b4748196-162d-4343-8a5d-1c3bd5323216

Details

Description

The UK start-up producing liquid-particle processing technology is able to exploit the capabilities this field offers at previously unattainable levels and energy efficiency.

Specific operations currently achieved are selective size dependent separation and high volume fraction concentration. Resulting concentrates are comparable with continuous flow centrifugation for dewatering applications. Concentration factors over 4 orders of magnitude are achievable to extract very low concentration targets from environmental samples.
Separation efficiency nears 100% when operating with low suspended solid volume fractions, suitable for excluding microorganisms from marine ballast water intakes or for freshwater drinking water treatment operations.

The start-up is currently seeking for partnerships under a research cooperation agreement or a technical cooperation agreement to set up pilots of their technology. Their aim is to act as a competitor for three liquid processing technologies such as filtration, centrifugation and flocculation.

Advantages and Innovations

Maintaining an unobstructed flow path allows this technology to continue operation in even high suspended solid applications, with operation up to 46% volume fraction maintaining 99.6% +/- 0.3% efficiency. Recovery of targeted particles is not hampered by penetration into pores, allowing unmatched recovery from low initial concentration. Particles can be selected out by size with single digit micron precision to ensure only those of interest are extracted, simplifying any subsequent detection or processing. Energy efficiency gains are expected to be in the range of 75% compared against flow centrifugation and no consumables or pre-concentration steps are required significantly lower process costs.

Stage of Development

Under development/lab tested

IPR Status

Design Rights,Granted patent or patent application essential,Exclusive Rights,Copyright,Other

Profile Origin

Other

Keywords

Technology

06004	Micro- and Nanotechnology related to Biological sciences
06006012	Bioprocesses
06006013	Downstream Processing
07001010	Micro- and Nanotechnology related to agriculture
07003004	Micro- and Nanotechnology related to marine resources

Market

04006	Cellular and Molecular Biology
04007	Enzymology/Protein Engineering/Fermentation
05001001	Diagnostic services
08002001	Energy management
08004003	Water treatment equipment and waste disposal systems

NACE

A.03.2.1	Marine aquaculture
A.03.2.2	Freshwater aquaculture
C.21.1	Manufacture of basic pharmaceutical products
E.36	Water collection, treatment and supply
M.74	Other professional, scientific and technical activities

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person
Maria Dolores Guillén Ruiz

Phone Number
+34 955 00 74 78

Email
mariad.guillen.ruiz@juntadeandalucia.es

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

No.

Languages Spoken

English
Polish

Client Country

United Kingdom

Partner Sought

Type and Role of Partner Sought

They look for partners with whom to set up pilots of their technology. Any partner type is welcome: industry, academy, research organization or business.
Specifically, they hope to find partners which would be dealing with batches of more than 400 litres of liquid containing particles (microorganisms, cells, silt, etc) ranging from 4 to 500 microns, which need to be separated from each other. Both liquid, as well as particles are collected therefore it does not matter which of two is the partner's end product. The potential partner would engage in collaboration under the research cooperation agreement or the technical cooperation agreement.

Type and Size of Partner Sought

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

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Encapsulation of Active Compounds

Summary

A Spanish company in the nanotechnology field, has patented two microencapsulation processes which provide straightforward solutions for cosmetics, food and even agro-industrial applications, responding to the increase demanding of microencapsulation technologies by the market. They are flexible and help to improve the cost/performance and better product quality.The company seeks industrial or research partners from the mentioned sectors for technical, research or license cooperation agreements.

Creation Date	08 March 2017
Last Update	21 April 2017
Expiration Date	21 April 2018
Reference	TOES20170303001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/4a70f377-f76d-4135-acc3-06c129adca32

Details

Description

The Spanish company was created in 2001 by a group of entrepreneurs and researchers. It provides customised microencapsulation services based on its own patented technologies, to create emulsions and microparticles with the size, homogeneity, compositional and structural characteristics specified by their clients, and with a final size that can easily be modified from 0.9 µm up to 7000 µm.

The company has a highly qualified in-house R&D department with extensive experience in numerous sectors. The combination of this human work team with the use of a set of highly versatile technologies allows even highly complex projects to be undertaken. The R&D team has experience in:

- Protection and controlled release of fragrances
- Stabilisation of probiotics
- Transformation of liquids into powders
- Encapsulation and stabilisation of emulsions
- Flavourmasking
- Design of drug-release profiles
- Encapsulation of drugs with a high degree of size control
- Mixing of incompatible components
- Development of fluorescent microparticles for diagnostic kits
- Stem cell encapsulation

The active substances with which they work include probiotics, stem cells, drugs, ranging from relatively simple molecules to peptides and proteins, enzymes, oils, such as omega 3, natural extracts or aromas for a wide range of sectors.

The technology is applicable to several sectors such as: agro-food industry, pharmaceutics, cosmetics or biotechnology.

The company looks for partners related to any of these sectors for different types of collaboration:

- Companies, interested in license collaboration agreements
- Industrial partners interested in technical cooperation agreements, in order to adapt the technology to the companies´ needs and the industrial scale up of the technologies
- Research institutes and academia, in order to collaborate with them in the development of new applications of the patented technologies or for the development of new patents.

As result of this collaboration, the company expects to increase its market quote through the access to new clients and markets, contributing to strengthen its innovation capacity.

Advantages and Innovations

The company uses its own technologies, allowing it to achieve what other techniques cannot: high rates of entrapment and speciality in sensitive substances such as probiotics, living cells and essential oils. Furthermore, it has a pilot plant for experimentation and production of small batches of particles, and currently participates in innovative developments in the areas of functional food, cosmetics and home care and agriculture. The use of this plant could be advantageous for those potential partners interested in carrying out research and development activities in collaboration with the company.

Stage of Development

Prototype available for demonstration

Comments Regarding Stage of Development

The company is working on the industrial scale up of its technology. Nowadays they have a production capacity of 200-400 kg of dry microparticles per year, and have plans to make it up to 6 Tn/year within a period of 18 months.

IPR Status

Patents granted

Profile Origin

Private (in-house) research

Keywords

Technology

05005	Micro- and Nanotechnology
06004	Micro- and Nanotechnology related to Biological sciences

Market

05001007	Other diagnostic
05007002	Pharmaceuticals/fine chemicals
07003002	Health food
07004002	Health and beauty aids

08001022 Agricultural chemicals

NACE

M.74.9.0 Other professional, scientific and technical activities n.e.c.

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

Phone Number

+34 955 00 74 78

Email

mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group

Nano- and Microtechnologies

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
French
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The company looks for partners from agro-food industry, pharmaceutics, cosmetics or biotechnology sectors as follows:

- Companies, interested in license collaboration agreements
- Industrial partners interested in technical cooperation agreements, in order to adapt the technology to the companies´ needs and the industrial scale up of the technologies
- Research institutes and academia, in order to collaborate with them in the development of new applications of the patented technologies or for the development of new patents.

It´s also opened to any other kind of collaboration that could be of interest for both parts.

As consequence, the company expects to increase its market quote through the access to new clients and markets, contributing to strengthen its innovation capacity.

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

License agreement
Technical cooperation agreement
Research cooperation agreement

Synthesis of natural hybrid nanopigments for multiple industrial applications

Summary

A Spanish research group has designed a new process to develop nanostructured hybrid nanopigments (from synthetic or natural dyes) which can confer improved optical, thermal, and mechanical properties when they are applied on composite materials. These new coloured nanomaterials are useful for many industrial sectors since they can be applied on different kinds of materials. Companies interested in license or technical cooperation agreements are sought.

Creation Date	31 March 2017
Last Update	11 April 2017
Expiration Date	11 April 2018
Reference	TOES20170331001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/2d828bc5-aa34-4d79-ae1c-187ceab27277

Details

Description

The development of composites materials using nanometric scale additives (as nanoclays) makes possible to obtain high-performance materials for diverse industrial sectors. For example, nanoclays reinforce and improve the mechanical properties of polymer matrices.

The polymers' resulting properties will depend on the composite materials structures obtained, regardless the polymeric matrix employed. The best properties are achieved with the exfoliated composites, instead of the intercalated ones (Figure 1). To this end, it is often necessary to modify the nanoclays surface properties, making use of additives to ensure the correct polarity and to get a uniform dispersion of the particles.

In the last few years, conventional polymer matrices have been substituted by polymers from biomass, or biopolymers. The aim is to improve the thermal, mechanical and barrier properties of the biopolymer to enable its use in different industrial applications, using environmental friendly materials at the same time.

A Spanish research group has developed an optimised process to obtain hybrid nanopigments (with synthetic or natural dyes) able to confer improved optical, thermal and mechanical properties to the materials in which they are applied on.

Depending on the material properties to be reinforced, the nanoclay structures, the surface additives/modifiers, and their incorporation moment during the synthesis process are selected.

The nanopigment synthesis process needs the inorganic component (nanoclay) modification, in order to allow and improve the dye interaction, and then, the polymer matrix interactions.

Different kinds of modifiers have been selected: surfactants, mordants and coupling agents.

For the nanopigment synthesis and the nanocomposite generation, the following components have been chosen:

1. Nanoclays
2. Dyes
3. Thermostable polymers (resins) from different sources (natural, synthetic and blends).
4. Thermoplastic polymers from different sources (natural, synthetic and blends).

This new procedure maximises the adsorbed dye in the nanoclay, the dye temperature fastness (degradation temperature) and the polymer matrix temperature resistance (degradation temperature). In addition, it minimises or avoids the dye migration effects on their application, both in wet or dry conditions. Finally, it improves:
• the mechanical polymer matrix properties, as flexural / tensile resistance, and also it changes the viscosity of the initial matrix.
• the oxygen and water barrier properties of the polymer matrix.
• the polymer flame retardant properties.
• the coloured biopolymer transparency properties.
• the nanopigments colouring power, applied on a polymer matrix.
• the ultraviolet-visible colour fastness using nanoclays as host in the hybrid pigments.

Another advantage is that it can be obtained a wide colour gamut from the same dye molecule, changing the synthesis process conditions. It can also be obtained different texture properties, depending on the nanopigment synthesis factors.

The materials in which these nanopigments could be applied are, among others: ceramics, printing inks, paints, synthetic fibres, natural fibres, coating materials, textiles, paper, polymeric materials, biopolymers, cement and concrete, mortar, construction materials, cosmetics, food packaging, footwear, toys, wood and furniture, stone and marble.

The research group is looking for companies interested in acquiring this invention for commercial exploitation through licensing agreement or technical cooperation (Development of new applications, adaptation to specific needs of the company, technical reports and scientific assessment, etc.).

Advantages and Innovations

The most innovative aspect of this technology is the development of a novel method to synthesize nanostructured hybrid nanopigment leading to improved optical, thermal and mechanical properties in materials in which these nanopigments are applied on.

While the advantages of this method are:
• Reduction of the additives incorporated in the composite generation.
• Reduction of the manufacturing composite cost.
• It maximizes the adsorbed organic dye (natural or synthetic) by nanoclays.
• Increase of the degradation temperature of the organic dyes.
• Increase of the polymer matrix degradation temperature.
• Improvement of the final material mechanical properties.
• It adjusts the transparency and colouring power of the synthetized material.
• Increase of the degradation by ultraviolet-visible light fastness of the coloured materials.
• It avoids the migration of the dye from the composites materials.

Stage of Development

Concept stage

Comments Regarding Stage of Development

The technology has been developed on a pilot scale. Different characterization tests have been carried out in order to evaluate the performance of the synthesis process, the reinforcement produced by the dye-clay interactions, and the mechanical, optical and thermal properties of the materials in which the nanopigments were applied. Natural components in the nanopigment synthesis, and in the matrix materials, or binders were used.

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Spanish patent applied for but not yet granted. PCT application.

Profile Origin

Other

Keywords

Technology

02007005	Composite materials
02007014	Plastics, Polymers
02007024	Nanomaterials

Market

08	INDUSTRIAL PRODUCTS
08001013	Ceramics
08001018	Polymer (plastics) materials

NACE

M.72	Scientific research and development
P.85.4.2	Tertiary education

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

Phone Number

+34 955 00 74 78

Email

mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group

Materials

Client

Type and Size of Organisation Behind the Profile

University

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Companies
- Specific area of activity of the partner: Materials science
- Task to be performed: Acquisition of this technology through license agreement. Technical cooperation agreements through:

• Joint development of new applications,
• Adaptation to the company's needs,
• Technical reports and scientific assessment.
• Specific customized training
• Standardization services, calibration, national and/or international technical standard reports, etc.
• Staff exchange for specific periods of time (to learn specific techniques).
• Rent the internal equipment to clients that wish to continue their own tests.
• Technological support for those techniques that require highly skilled or sophisticated instruments, that are not available to the company.

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

Attachments

Fig1b.jpg

Fig2.jpg

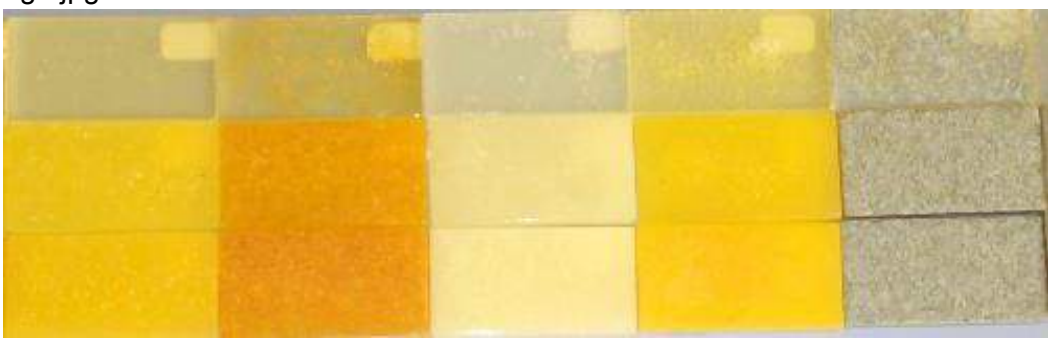

Fig3.jpg

Fig4.jpg

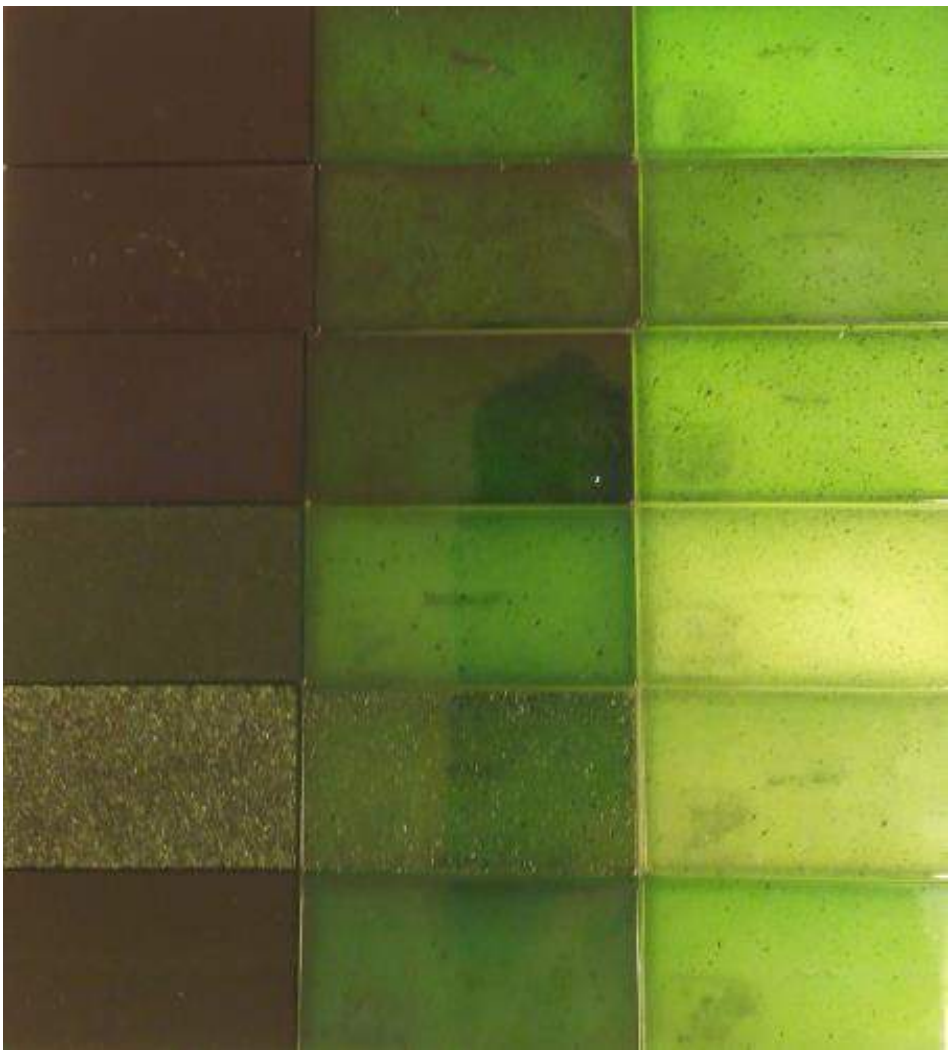

Figure 1.jpg

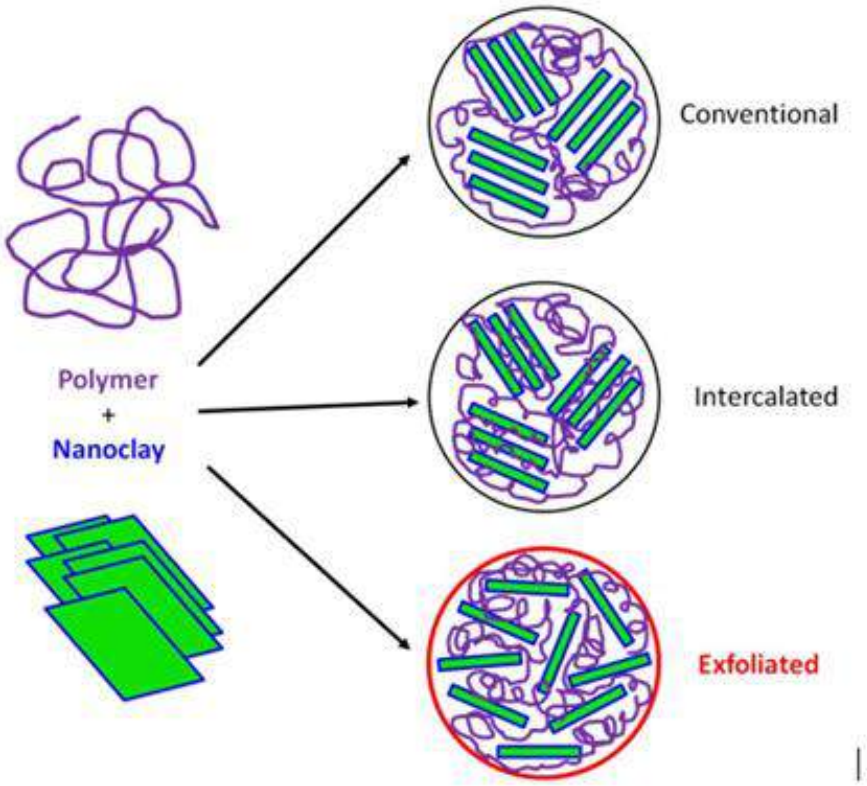

Figure 1. Possible composite materials structures obtained by polymer matrix and lamellar inorganic nanoclays.

2. PRODUCCIÓN INDUSTRIAL

Low cost atmospheric plasma technology for optimized desizing of cotton fabrics

Summary

Italian researcher with international experience, specialized in industrial applications of cold atmospheric plasma, proposes know-how for production of industrial machines of atmospheric plasma for textile industry, that provide strong reduction of electric energy and of water consumption for the processes of desizing and dyeing of cotton fabrics. Producers of machines for textile industry interested to adopt ecologic technology are sought for technical cooperation agreements.

Creation Date	21 March 2017
Last Update	21 April 2017
Expiration Date	21 April 2018
Reference	TOIT20170321001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/b3a81cf1-f3c7-4281-86ef-859fe9a44928

Details

Description

Cold atmospheric plasma is innovative technology that find many novel applications in different branches of industry. An Italian researcher has developed specific technology and know-how for production of specific machines of cold atmospheric plasma for textile industry. Low cost in-line treatment of cotton fabrics by means of cold atmospheric plasma, using only ambient air, provides significant reduction of electric energy, of water consumption and process time for desizing and dyeing of cotton fabrics.
Desizing and dyeing processes are the most expensive operations in textile finishing as soon it is required big amount of energy and of hot water for cleaning the fabric from sizing agent and for subsequent dyeing. The quality of desizing and dyeing is the critical point for the commercialization of final garments. In actual production cycle, the necessity of big amount of hot water and of multiple rinsing is due to the hydrophobicity of sized cotton fabric and due to the poor solubility of size agent in water. Primary effect of cold plasma is effective cold oxidation of substrates that produces strong wettability by means of polarization of substrate surface. In textile applications, plasma effectively converts hydrophobic fabrics to strongly hydrophilic ones. In proposed application for the optimization of desizing, plasma directly oxidises the size agent on cotton yarns without heating, due to the chemical action of oxygen radicals (atomic oxygen) generated in air by plasma.
Plasma treatment brings also to fast penetration of dye in folds and sewing and to better shade of colour on final garments. In case of dark colours dyeing, desizing process can be completely avoided due to the cold atmospheric plasma pre-treatment. Apart of desizing and dyeing processes, plasma treatment permits to optimize bleaching and mercerization processes, providing the reduction of soda and hydrogen peroxide concentrations. Other applications of cold atmospheric plasma on cotton fabrics are the improvement of anti-bacterial properties, as well improved bonding of nano particles on fabrics.

This plasma technology and the above described applications could be implemented in existing or new machines for textile industry, and producers of such machines are sought for technical cooperation agreements.

Advantages and Innovations

According to “Markets and Markets” analysis, textile industry segment held the largest share of 31,6% of plasma technology market in 2015. According to the global forecast, textile segment of cold plasma applications will rise from USD 1,38 billion in 2016 to USD 2,91 billion up to 2021.
Atmospheric pressure cold plasma in ambient air is applied in-line, without vacuum chambers and without specific gases and chemical substances. The process cost of “dry” plasma treatment is low, meanwhile it produces significant saving of electric energy and of water.
Innovative machine of atmospheric plasma uses only ambient air and works in the in-line regime. Optimized plasma treatment doesn't imply on other properties of cotton, meanwhile effectively optimizes desizing and dyeing processes.
Proposed original atmospheric plasma machine is much more effective than similar machines of different producers, and it excludes burnings or other damages on fabrics.

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

In the result of 9 years of extensive basic and applied research, original concept for the construction of innovative atmospheric plasma machines was developed.
In 2014 it was applied for development of specific machine for in-line treatment of wool fiber, that eliminates the use of chlorine for production of anti-shrinking and anti-pilling properties of wool, as well optimized dyeability. Application of cold atmospheric plasma on wool has permitted saving of electric energy for ca. 50% and of water for ca. 50%. Machine for wool fiber was recently installed and operates in Italian industry.
Cotton fabric needs plasma machine of specific construction. Newly developed application on cotton fabrics can be demonstrated on pilot machine for 60 cm height bobbins.
Optimal plasma energy for effective plasma treatment of cotton fabrics will be optimized with customer and set of process parameters will be established prior to the production of industrial plasma machine for desizing and dyeing of cotton fabrics.

IPR Status

Secret Know-how

Comment Regarding IPR status

Patenting of the principle and of the construction of innovative atmospheric plasma machine for cotton fabrics will be performed prior to the development, under agreement with the partner.

Profile Origin

National or Regional R&D programme

Keywords

Technology

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

Market

08003005 Other industrial machinery for textile, paper & other industries

NACE

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

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

Phone Number

+34 955 00 74 78

Email

mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group

Textile and Fashion

Restrict Dissemination to Specific Countries

Argentina, Austria, Belgium, Brazil, Bulgaria, Canada, China, Denmark, Egypt, Finland, France, Germany, India, Indonesia, Italy, Mexico, Netherlands, Paraguay, Peru, Portugal, Singapore, SouthKorea, Spain, Switzerland, Taiwan, Tunisia, Turkey, UnitedKingdom, USA, Vietnam,

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

Innovative atmospheric plasma machine provides high economic efficiency and compatibility of plasma treatment with current ecologic requirements in textile industry. The machine permits to avoid characteristic problem of atmospheric plasma technology applied in ambient conditions (burnings or other undesired effects on cotton fabrics), nevertheless it uses ambient air and doesn't need specific gases or chemical reagents for production of strong hydrophilicity and effective solubility of size agent in room temperature water.

Languages Spoken

English
Russian
Italian

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

Ideal partner is the producer of the machines for textile industry, especially for desizing and dyeing of cotton fabrics.
Another expected partner is cotton dyer interested for the best available economic and ecologic solutions for the production.
This technology and the above described applications could be implemented in existing or new machines for textile industry through technical cooperation agreements.

Type of Partnership Considered

Technical cooperation agreement

Attachments

Laboratory scale atmospheric plasma machine for fabrics.JPG

Technology Request

Seeking customized cutting-off machine for precise glass tube cutting in longitudinal direction (lengthwise)

Summary

A small German company specialized in calibrated glass processing seeks a customized cutting-off machine for precise glass tube cutting in longitudinal direction (lengthwise). For glass tube diameters 10-200 mm, lengths of glass tubes maximum 1000 mm. Seeking industrial and engineering partners with experiences in precision glass processing technologies and the ability to design and supply the cutting-off machine; preferring collaboration under a technology cooperation agreement.

Creation Date	07 April 2017
Last Update	14 April 2017
Expiration Date	14 April 2018
Reference	TRDE20170406001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/70b4f7b2-c1a8-463c-966b-acc387a4e716

Details

Description

A small German company specialized in calibrated glass processing seeks a customized cutting-off machine for precise glass tube cutting in longitudinal direction (lengthwise). Until now the expected very specific and highly precise machine could not be provided either by the regional or national market. The company has visited several fairs looking for respective offers, but no suitable and reliable solution could be found.

Technical dimensions and parameters:
Diameters: 10 – 200 mm
Lengths: maximum to 1000 mm
Material quality: glass
Precision: +/- 0,01 mm

Not requested: Slicing machines for glass tubes

Technical Specification or Expertise Sought

Seeking industrial and engineering partners with experiences in precision glass processing technologies and the ability to design and supply the new cutting plant.
Potential partners should provide the following performances:
- proof of concept incl. lab trials
- design and installation of the machine
- testing of the pilot machine
- taking over guarantee and service

All activities will be fixed under a technology cooperation agreement.

Keywords

Technology

02002010	Machining (turning, drilling, moulding, planing, cutting)
02007007	Glass

Market

08003005	Other industrial machinery for textile, paper & other industries
08003007	Other industrial equipment and machinery

NACE

C.23.1.3	Manufacture of hollow glass
C.23.1.9	Manufacture and processing of other glass, including technical glassware

Network Contact

Issuing Partner
AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person
Maria Dolores Guillén Ruiz

Phone Number
+34 955 00 74 78

Email
mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group
Materials

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

1990

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Seeking industrial and engineering companies or service providers with experiences in precision glass processing technologies and the ability to design and supply the cutting plant.

Role of partner:
Potential partners should have the following competencies and provide:
- proof of concept incl. lab trials
- design and installation of the machine
- testing of the pilot plant
- taking over guarantee and service performances

All activities and tasks will be fixed under a technology cooperation agreement.

Type and Size of Partner Sought

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

Type of Partnership Considered

Technical cooperation agreement

Technology Request

[A partner for EUREKA Cluster urgently sought] Development of light integrated CPS (Cyber Physical Systems) for small and medium manufacturer

Summary

A Korean SME specialized in smart factory and Industrial IT would like to develop IIOT (the Industrial Internet of Things) for collecting data and integrated CPS combined with server. The company is looking for a partner with advanced technologies in deep learning, AI (Artificial Intelligence) and process control. The company hopes to apply for a EUREKA Cluster program called SMART due by 08, June, 2017. Possible partnership is research and/or commercial agreement with technical assistance.

Creation Date	07 April 2017
Last Update	18 April 2017
Expiration Date	18 April 2018
Reference	TRKR20170407001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/d0a52df0-1257-4eb1-8fc5-eab246c81e3f

Details

Description

Korean SME was established in 2010 and has strong strength in large-scale plant control such as combined heat and power plant, various industrial complex and Korean shipyard. Recently, the company has developed IIOT server using OPC UA, which is the international industry standard, for the first time in Korea and delivered it to second largest security company in Korea. Up to now, it has been operated on around 60 large sites such as universities. It is not only the manufacturing using OPC UA but also it is available in many places where the 4th industrial revolution is taking place.

In general manufacturing environment of the manufacturing industry, there is a software connection for supporting and interlocking equipment, but it has a not-flexible structure that is hard to change in the initial physical configuration. Also, this software cannot produce mass customization of many kinds of current and future consumption trends and is difficult to achieve intelligent manufacturing.
The existing solutions as CPS are considerably expensive and take long time to implement, so these solutions are applied to large-scare manufacturing facilities and sites. There are limitations to apply it to small and medium-sized manufacturing facilities.

CPS that the company has been developing to solve this problem needs data collection from all systems, devices, sensors where data is generated vertically and horizontally, both inside and outside the plant. To collect all data using OPC UA, standardized protocols and frameworks are required. And the control-based process diversification by the integrated CPS, the small and

medium sized manufacturing site can cope with rapid market change with low cost.
In addition, OPC UA node modelling and CPS modelling will be developed by GUI (Graphical User Interface) modelling tool that can be configured at one time and then, users can use it easy. Some process simulation is possible based on the data collected through the IIOT server.

The goal is to develop a CPS Analyzer with built-in analysis algorithms and intelligence for AI (Artificial Intelligence) analysis and big data analysis. Due to the nature of OPC UA, it has flexible extensibility and also provides UVD (Unified Video Decoder) owned 3D engine-based dashboards for convenient operation.
The concept of CPS has not yet been established and many ideas are realizing through technologies. The company want to collaborate with partner making visible effects with its own technologies on the 4th industry revolution without any technical limitations. There is no regional restriction on the partner, and the R&D project is available in any form. The company hopes the R&D period for time to market is within three years including commercialization. The commercialization is essential since the company is expecting to enter a European market with the newly developed technology by collaborating with the partner company. The project should be submitted by 08, June, 2017. Therefore, deadline of the EOIs (expressions of interest) for this profile will be at May, 2017.

In case of working R&D project together, the company will be in charge of expanding vertical-integrate, and partner is performing in research and development for many type of service according to horizontal expand and tis capability.
The company is expecting to finalize the R&D proposal with the overseas partner after they are done with opinion exchange via online as well as an on-site meeting at EUREKA Day held in Barcelona from 14 to 19, May.

Technical Specification or Expertise Sought

* Sought Technology
- The company needs analysis technology for AI and big data. Then, this CPS has to be built-in analysis algorithms and intelligence
- The company hopes to provide light-weighted CPS in low price
* The company is looking for a partner who has advanced technology in AI or deep Learning that CPS must have.
* It would be better if the company possesses a technology that is required by the manufacturing industry.

Stage of Development

Concept stage

Comments Regarding Stage of Development

The core part of vertical integrated IIoT Server using OPC UA ((OLE(ObjectLinking and Embedding) for Process Control Unified Architechure) for CPS is being developed and commercialized in Korea for the first time.

IPR Status

Copyright

Keywords

Technology

01001001	Automation, Robotics Control Systems
01003001	Advanced Systems Architecture
01003008	Data Processing / Data Interchange, Middleware
01006013	Communications Protocols, Interoperability
02004	Plant Design and Maintenance

Market

01004003	Communications processors/network management
01004004	Protocol converters and emulators
08002002	Industrial measurement and sensing equipment
08002003	Process control equipment and systems
08002004	Robotics

NACE

C.27.1.2	Manufacture of electricity distribution and control apparatus
J.63.1.1	Data processing, hosting and related activities

Network Contact

Issuing Partner
AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person
Maria Dolores Guillén Ruiz

Phone Number
+34 955 00 74 78

Email
mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group
ICT Industry and Services

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

2010

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

South Korea

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Types do not matter. Company, university or institute who would like to collaborate with this Korean company
- Specific area of activity of the partner: Industrial IT field or 4th industrial revolution relevant fields. Also partner specializing in AI or deep learning filed is welcomed.
- Task to be performed: Hope to apply for an R&D project for EUREKA Cluster, Advanced Manufacturing call for projects[SMART]. Under R&D and commercial cooperation, the company would like to develop light integrated CPS including commercialization.

Type and Size of Partner Sought

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

Type of Partnership Considered

Commercial agreement with technical assistance
Research cooperation agreement

3.

TECNOLOGÍAS DE LA CONSTRUCCIÓN

An Italian company offers a licence agreement for services for concrete corrosion monitoring and cathodic protection of reinforced concrete structures

Summary

An Italian individual company offers a service for monitoring concrete corrosion linked to chloride and for restoring the structure. It can be used for buildings as well as any infrastructure made of concrete such as bridges, car parks, tunnels and foundations.The main advantage is the prolongation of the concrete life-cycle with a non destructive procedure.The company is looking for a licence agreement with companies offering monitoring and restoration services for concrete structures.

Creation Date	11 April 2017
Last Update	26 April 2017
Expiration Date	26 April 2018
Reference	TOIT20170411001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a1f285f0-eb66-48bf-ac81-5f4a0572b66b

Details

Description

The company, whose owner has a long lasting experience in technologies for corrosion assessment and preserving concrete from external dangerous agents, offers different services to monitor and reinforce concrete structures and mitigate corrosion impacts.
Corrosion is a phenomenon of degradation of materials that produces a great impact from a social, environmental and economic point of view. Today, concrete is the most widely used building material in the world and corrosion of concrete structures has become a very important issue. Based on new researches, the methods previously used do not give sufficient guarantees and concrete structure owners must provide sufficient protection for these structures. The Federal Highway Administration (FHWA) issued a statement describing Cathodic Protection as the only proven rehabilitation technique to stop corrosion in salt-contaminated structures, regardless of chloride content in the concrete. By this approach, the company offers to conduct the following services for reinforced concrete structures' owners:

1. Corrosion assessment and life-time estimation of concrete structures using innovative approaches;
2. Providing corrosion protection systems based on using sacrificial anodes to protect reinforced concrete structures;
3. Evaluation of the behavior of cathodic protected reinforced concrete structures by assessing protection criteria and monitoring of current and voltage with high precision.

The service can be used on old and also new concrete structures and has been offered

successfully in the countries of the Middle East. It is a novelty for the EU market.

The company is offering a licence agreement to companies that offer monitoring and restoring services for concrete structures. After a preliminary transfer of know how to the partner, the company will support the start up of the service.

Advantages and Innovations

The main innovative aspects of the company are as follows:

1. They use data based on kinetic approaches - the Galvanostatic Pulse Technique (GPT) and the Electrochemical Impedance Spectroscopy Technique (EIST) - instead of a thermodynamic approach to estimate the remaining life time of reinforced concrete structures;

2. They use a wide variety of non-destructive test equipment to assess the residual life of concrete structures;

3. They have more than 15 years' experience in the industry, with scientists and professionals that have an established presence in the field.

The main advantages of the service are:
1. low costs for monitoring and restoring concrete infrastructures (cost reduction can be 20 - 80% of conventional repair);
2. green restoration method with low impact on environment;
3. protection service works in chloride contaminated concrete structures regardless of chloride content in the concrete;
4. it is not necessary for extensive removal of contaminated concrete up to and beyond the reinforcement;
5. it reduces time required for remediation;
6. it removes the need for structural propping;
7. it requires no power source when using sacrificial anodes;
8. it has potential to be used in remote areas or where high calibre technicians are in short supply.

The needs that are fulfilled are:
1. helping infrastructure owners (buildings, etc.) to easily verify the corrosion status of their infrastructure;
2. helping infrastructure owners to restore their infrastructures without using destructive and expensive methods.

Stage of Development

Already on the market

Comments Regarding Stage of Development

The technology has been applied outside Europe.

IPR Status

Secret Know-how

Comment Regarding IPR status

The technology has not been protected.

Profile Origin

Other

Keywords

Technology

02006002	Construction methods and equipment
02006005	Construction maintenance and monitoring methods & equipment
02006007	Management of construction process & life
09003	Electronic measurement systems

Market

09007004	Engineering and consulting services related to construction

NACE

F.42.1.1	Construction of roads and motorways
F.42.1.3	Construction of bridges and tunnels
M.71.1.2	Engineering activities and related technical consultancy
M.71.2.0	Technical testing and analysis

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

Phone Number

+34 955 00 74 78

Email

mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2015

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

The owner is a member of the International Association of Corrosion (NACE).

Languages Spoken

Turkish
English
Arabic

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

The partners should be a company offering monitoring and restoration services of concrete infrastructure.
The partner should acquire the know-how of the company, learn the tools to be used. The company will help the partner to practice the startup phase of the service.

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement

Attachments

Immagine2.jpg

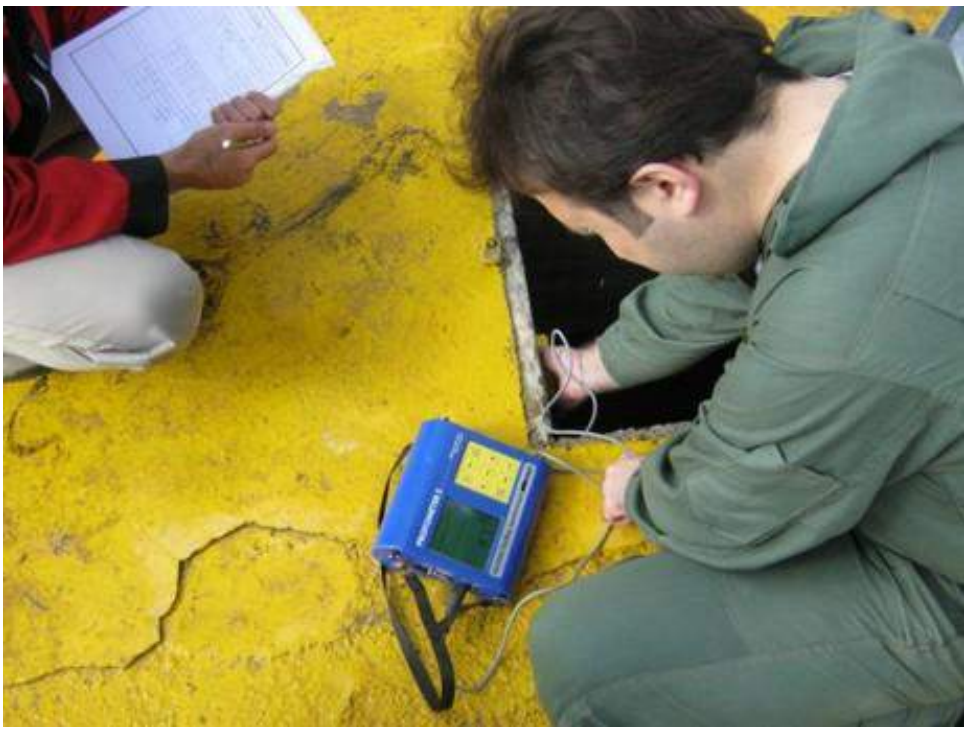

Immagine1.jpg

Licensee for short-fibre geopolymer-based composites reinforced with nanoparticles is sought

Summary

Scientists at a Czech university have developed short-fibre geopolymer-based composites reinforced with nanoparticles. The solution offered is based on high temperature resistant composites. The scientists are looking for industrial partners, who are manufacturing composites and are interested in acquiring a license for production. License agreements are sought.

Creation Date	19 April 2017
Last Update	25 April 2017
Expiration Date	25 April 2018
Reference	TOCZ20170419001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/05b57596-6ece-4ddc-b221-448ebd1be2f0

Details

Description

Geopolymers are produced by mixing aluminate and silicate containing minerals or alumina-silicates with an activating highly alkaline solution. As a result a three dimensional network of silica and alumina tetrahedra sharing oxide-bonds is formed. Geopolymers possess mechanical properties which are comparable with materials based on ordinary Portland cement, and they have superior performance regarding heat and acid resistance.

The novelty of the solution offered by the Czech researchers is based on the use of nano-fillers and micro-fillers in the composite. It provides improved mechanical properties compared to competitors and is environmentally friendly. The main advantage is the possibility of geopolymer composites for high temperature applications (up to 800°C).

The technology is suitable for companies involved in the field of construction or energy industry. The technology is ready for manufacturing the composite and is ready for transfer to the industry and mass utilization. That is why the technology developers are looking for a licensee based on a licensing agreement. The subject of the license will be know-how for manufacturing the short-fibre geopolymer-based composites reinforced with nanoparticles.

Advantages and Innovations

- Environmentally friendly material in comparison with a normal concrete, due to lower production temperatures

- Aesthetic and technical performance, compared with normal concrete, due to the possibility of hardening and colouring

- Availability of high temperature applications (up to 800°C) in comparison with normal concrete (only up to 500°C)

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

The manufacturing technology for production of the composite is available for demonstration at the university´s laboratory.

IPR Status

Patents granted

Comment Regarding IPR status

Patent granted in the Czech Republic.

Profile Origin

National or Regional R&D programme

Keywords

Technology

02006001	Materials, components and systems for construction
02006002	Construction methods and equipment
02007002	Building materials
02007005	Composite materials

Market

06001006	Chemicals and materials
08001018	Polymer (plastics) materials
09007002	Manufacture of construction materials, components and systems

NACE

C.23.4.4	Manufacture of other technical ceramic products
C.23.6.9	Manufacture of other articles of concrete, plaster and cement
C.28.2.1	Manufacture of ovens, furnaces and furnace burners

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

María Dolores Guillen Ruiz

Phone Number
+34 955 00 74 78

Email
mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1953

Turnover

10 - 20M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Slovak
Polish
Czech

Client Country

Czech Republic

Partner Sought

Type and Role of Partner Sought

Type of Partner Sought:
Industry

Specific area of activity of the partner:
Manufacturers or companies involved in the field of construction or energy industry

Tasks to be performed by the partner sought:

The University would like to cooperate with a partner from industry, who would like to manufacture the offered technology based on a licensing agreement.

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

Partners sought for a sound absorbing material with nanofibrous resonant membrane

Summary

A Czech university has developed a sound absorbing panel with nanofibrous membrane for applications in room acoustic, transportation and noise control. The sound absorbing material solves noise problem of wide frequency spectrum and is lighter and thinner than others. Scientists are looking for partners interested in further research and development based on a technical cooperation agreement and for companies interested in production under a license agreement.

Creation Date	20 April 2017
Last Update	27 April 2017
Expiration Date	27 April 2018
Reference	TOCZ20170420001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/effb88ba-505e-4e15-99b2-2e0f682e16c6

Details

Description

Sound absorbing material solves noise problem of wide frequency spectrum.

The Czech researchers offer different types of acoustic panels with nanofibrous membrane for demonstration and evaluation in the laboratory and in-situ having size 500 x 600 mm. The final panel size is dependent on application, production and manipulation conditions. The nanofibrous resonant membrane can be made in 500 mm width in a semi-industrial scale and in 1600 mm width in an industrial scale. The nanofibrous layer is produced in the Czech Republic.

The sample contains for example foam of 10 mm thickness with resonant nanofibrous membrane protected by the thin nonwoven of 20–30 g.m-2 basis weight on the face of the sample.

The sample contains for example perforated panel of 1 mm thickness with resonant nanofibrous membrane protected by the thin nonwoven of 20–30 g.m-2 basis weight on the back of the sample.

The installation distance between wall and sample of 1 mm thickness is effective from 10 mm to 50 mm. The distance can be utilized for light or sound source installation.

The researchers expected in the case of a licensing agreement acquiring a license from the interested partner, where the subject of a license will be know-how for manufacturing the resonant nanofibrous membrane.

Additionally, a joint further research and development or adaptation of the material offered for

the specific purposes based on a technical cooperation agreement (e.g. also within a suitable European project such as Horizon 2020) is possible.

Advantages and Innovations

- Sound absorbing material solves noise problem of wide frequency spectrum from 300 to 10 000 Hz.
- The material is lighter and thinner than others. The thickness is in the range of 2–50mm. The basis weight is in the range of 20–3000 g.m-2.
- The nanofibrous resonant membrane can be applied onto the face of almost any sound absorbing material such as foam, fibrous stuff or any compressible material.
- The price of resonant nanofibrous membrane is close to 2 Euros per 1m2, which should be acceptable with regard to value for price ratio.

Stage of Development

Available for demonstration

IPR Status

Patents granted

Comment Regarding IPR status

Patent granted in the Czech Republic.

Profile Origin

National or Regional R&D programme

Keywords

Technology

02006001	Materials, components and systems for construction
02007002	Building materials
02007018	Advanced Textile Materials
04007004	Thermal insulation
10002014	Noise Pollution

Market

06006001	Thermal insulation
08001015	Other speciality materials
09007002	Manufacture of construction materials, components and systems

NACE

C.20.6	Manufacture of man-made fibres
F.43.3.9	Other building completion and finishing

Network Contact

Issuing Partner
AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person
Maria Dolores Guillén Ruiz

Phone Number
+34 955 00 74 78

Email
mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1953

Turnover

10 - 20M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Slovak
Czech

Client Country

Czech Republic

Partner Sought

Type and Role of Partner Sought

Type of partner sought:
Industry and research organizations

Specific area of activity of the partner:
Industry focused on materials for noise control in transportation, room acoustic or noise

dumping fields. Research organizations focused on material research and development in acoustic.

Task to be performed by the partner sought:

In the case of a Licensing agreement:
Acquiring a licence

In the case of a Technical cooperation agreement:
Joint further research and development and/or adaptation of the material offered

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement
Technical cooperation agreement

4.
MATERIALES

German research institute seeks industrial partners working on redox-flow battery to join its H2020 proposal

Summary

A German research institute is looking for industrial partners to take part in their consortium for a H2020 proposal through a research cooperation agreement in a project that aims at developing a redox-flow battery that can be regenerated (recharged) by a low temperature (<100°C) heat source. The sought partners should be companies working in the field of redox-flow batteries, ceramics, liquid-liquid exchange, membrane chemical processes and/or related fields.

Creation Date	11 April 2017
Last Update	19 April 2017
Expiration Date	19 April 2018
Reference	RDDE20170411001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/34acd404-bcd9-4412-aea3-aaae5e999707

Details

Description

The research institute and its current partners are looking for industrial partners with different profiles and specialization to take part in the project that comes as response to the H2020 FETOPEN-01-2016-2017 topic. The cooperation between the consortium and the targeted partners will be based on a research cooperation agreement. The current consortium consists of the German research institute, an Italian research institute and an Italian SME.

The project aims at developing a prototype of a redox-flow battery that can be recharged by using a low temperature heat source (<100°C). The two feed solutions used by the battery have the same composition but different concentration. The cell produces current by exploiting the two feed solutions; at the end of the discharge, the difference of concentration between the two solutions vanishes. The recharge is performed by distillation, which restores the concentration difference.

The electrochemical device is unconventional, the further development of scheme is part of the project. It is a concentration cell, with analogies to a redox-flow battery. The electrodes will be carbon cloths, possibly platinized. The whole device requires, in particular, a diaphragm made of perm-selective material, which will be a solid-state ion conductor, e.g. a ceramic material of the class of NASICON. Another device that will be integrated in the system is based on a technology bearing analogies with the liquid-liquid exchange.

The deadline for the proposal submission is the 27th of September 2017.
The deadline for the Expression of interest is the 31st of August 2017.

Keywords

Technology

02007003	Ceramic Materials and Powders
04001003	Storage of electricity, batteries
04002005	Generators, electric engines and power converters
04007003	Process optimisation, waste heat utilisation
05004002	Extraction

Market

06003001	Solar/thermal energy
06003005	Geothermal energy
06006003	Heat recovery
06008	Energy Storage

NACE

M.72.1.1	Research and experimental development on biotechnology

Network Contact

Issuing Partner
AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person
Maria Dolores Guillén Ruiz

Phone Number
+34 955 00 74 78

Email
mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group
Intelligent Energy

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German
Italian

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

The research institute is looking for industrial partners with different profiles for a research cooperation agreement.

- Profile 1: SME/ Industry partner with an expertise in advanced/functional/technical ceramics to develop an ion-conducting diaphragm made of ceramics.

- Profile 2: SME/ Industry with expertise in redox-flow batteries to design and scale-up the electrochemical cell.

- Profile 3: SME/ Industry with expertise in engineering of solutions, databases of thermodynamic and electrochemical Properties to design the working fluids for the electrochemical cell, to optimize the solutions for distillation and to supervise the safety/ regulation issues.

- Profile 4: SME/ Industry with expertise in liquid- liquid extraction/ solvent extraction to develop a small mixer- settler to be associated to the prototype.

Type of Partnership Considered

Research cooperation agreement

5.
TRANSPORTES

A Korean company offers compact, lightweight, and high energy density hydrogen generators and fuel cell systems for UAV (Unmanned Aerial Vehicle), drone, robot etc

Summary

A Korean company specialized in manufacturing hydrogen generators and PEM (Proton Exchange Membrane) fuel cell systems has developed compact and lightweight products ranging from 200W to 1KW for UVA, drone etc. The company has tested the performance of the fuel cell and hydrogen generator using a UAV and succeeded in making it fly for a long time. The company hopes to find a partner for commercial, license, manufacturing, research cooperation or technical cooperation agreement.

Creation Date	03 April 2017
Last Update	24 April 2017
Expiration Date	24 April 2018
Reference	TOKR20170403001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/4cb851a5-32a2-4f65-9ab3-957bd2e0c4e8

Details

Description

The commonly used power generating source is fossil fuel which causes problem of noise, heat emission, operating time and affects our environment. Therefore, people have turned to an alternative energy source which is environmentally friendly and energy efficient.
Hydrogen fuel is considered the alternative energy source these days.
However, poor energy efficiency, economic feasibility, stability and low storage density are its main problems.
To solve these, a Korean company that is specialized in manufacturing hydrogen generator and PEM fuel cell system has developed compact and light weight hydrogen generators and fuel cell system ranging from 200W to 1KW that can be applied in UAV(Unmanned Aerial Vehicle), drone, robot and portable generators etc.

The company's hydrogen generator is developed based on the new hydrogen generating technology operated by solid state chemical hydride with no catalyst. Thus, product's reliability and durability have improved and as it is stored in a solid state, stability has increased as well. According to test results, operation was normal at various temperature conditions from -40 °C to 60 °C. In addition, the purity of hydrogen gas is also quite high. When connected to the PEM fuel cell, the performance of the fuel cell becomes stable as well.

In addition, the above mentioned technology allows easy treatment of by-products, smooth discharging and storage of hydrogen, providing the convenience of operating a compact hydrogen generator compared to the conventional hydrogen technologies.
As they can be easily operated and moved, they can be used for various applications in the military and private sectors.
The company has tested the performance of the fuel cell and hydrogen generator using an UAV as a platform first and succeeded in making it fly for a long time in the combat experiment jointly conducted by the Korean army.
Furthermore, the company has experiences including the participation in the Korean Army combat experiments with the military-use fuel cell-installed UAV's. Another performance include supplying of a 1KW class hydrogen generator to an international company for a high altitude (15,000ft) fuel cell-installed UAV project and fuel cell system to be used in APU (Auxiliary Power Unit) for battery-operated relief vehicles to NATO(North Atlantic Treaty Organization), etc.
The company is looking for a partner who needs fuel cell system or hydrogen generators for application in UAV, drone, robot etc. Sought partner should be interested in the commercial agreement with technical assistance, license agreement or manufacturing agreement. The company is also open for research cooperation agreement and technical cooperation agreement on the products for improvement.

Advantages and Innovations

- Compact in size, light weight and also high energy density
- Possible to generate and store hydrogen stably
- Ensuring long operating hours
- Increasing durability and useability by integrating various components necessary to generate hydrogen into a single structure
- Operation by solid state fuel without using a catalyst
- Focusing on the completeness and marketability of the system to make it operate in any temperature(-40°C~+60°C).
- Easy to handle
- Suitable for UAV, drone, robot, and various applications that want to ensure long operating hours in any temperature.

Stage of Development

Already on the market

IPR Status

Patent(s) applied for but not yet granted,Trade Marks

Comment Regarding IPR status

7 Korean patents applied for but not yet granted and 5 Korean and international patents applied. Also, the company possesses 2 trademark rights.

Profile Origin

COSME

Keywords

Technology

02011001	Aeronautical technology / Avionics
04001006	Transport and storage of hydrogen

04002001	Fuel cells
04002002	Hydrogen production
04002005	Generators, electric engines and power converters

Market

03003	Power Supplies
06007001	Other energy production
08002001	Energy management
09004001	Business products and supplies

NACE

C.27.1.1	Manufacture of electric motors, generators and transformers
D.35.1.1	Production of electricity
D.35.1.3	Distribution of electricity

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

Phone Number

+34 955 00 74 78

Email

mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group

Aeronautics, Space and Dual-Use Technologies

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

2011

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

South Korea

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: company, research institute, university.
- Specific area of activity of the partner: UAV(or drone) manufacturer, Any partners who need fuel cell systems or hydrogen generators.
- Task to be performed: Application of fuel cell or hydrogen generator on UAV, drone and robot, research & development, technical improvement or manufacturing of fuel cell and hydrogen generator

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement
Manufacturing agreement
Commercial agreement with technical assistance
Technical cooperation agreement
Research cooperation agreement

Technology Request

A Turkish technology company expert on smart and secure cities seeks specific drone technology

Summary

A Turkish ICT company well versed and deeply experienced in smart security surveillance, seeks a specific fully automated and robust drone technology that is needed for maintaining enhanced security at vulnerable areas. The company is open to signing, licence agreement,commercial agreement with technical assistance and / or technical cooperation agreement.

Creation Date	05 April 2017
Last Update	18 April 2017
Expiration Date	18 April 2018
Reference	TRTR20170405001
Profile link	http://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a422aa74-8928-4844-908b-970cda933280

Details

Description

The Turkish technology company active in ICT sector, deeply experienced and well versed in smart cities, was established in 2003, as a system integrator. The company also develops its own intergrated city security system software, geographic information systems, biometric features of electronic identifications that enables the live scanning of finger prints, traces of blood vessels, palm print etc. The company is also a certified Research and Development Center in Turkey, and continues its all operations in MENA Region (Middle East, North Africa and Asia). So far the Turkish company succesfully developed and implemented several safe and smart city projects.

The company seeks for a high level drone perimeter security technology. The technology is needed for maintaining enhanced security at vulnerable areas such as airports, borders etc. The drone shall have the following innovative capabilities:

– wireless charge ability on a dock preferably with sustainable energy resource which will enable no grid connection at remote areas and in emergency cases,
– the drone must be programmabale and shall not require human command whilst operation,
– the drone must be able to carry equipments like thermal and other types of advanced cameras.

The company would like to cooperate with innovative companies, providing specified drones that meet the requirements of the Turkish company. The Turkish company is open to signing various partnership agremeents such as; technical cooperation agreement, commercial agreement with technical assistance and licence agreement.

Technical Specification or Expertise Sought

The drone technology that is sought needs to cover the following features;

- the drone should be programmable
- it should have auto fly ability, not necessarily to be controlled by human
-should be charged with wireless technology and should fly back to its dock and auto-charge itself when necessary
- should be robust enough to carry advanced cameras such as thermal camera

Stage of Development

Already on the market

Keywords

Technology

01006012	Description Image/Video Computing
02008001	Air Transport
02009007	Artificial intelligence applications for cars and transport
02009016	Charging system
02009022	Security systems

Market

02004004	Other scanning related (incl. image processing, ...)
02007017	Expert systems
08002004	Robotics

NACE

J.61.9.0	Other telecommunications activities
J.62.0.1	Computer programming activities
J.62.0.2	Computer consultancy activities
J.62.0.9	Other information technology and computer service activities

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

Maria Dolores Guillén Ruiz

Phone Number

+34 955 00 74 78

Email
mariad.guillen.ruiz@juntadeandalucia.es

Open for EOI : Yes

Dissemination

Send to Sector Group
ICT Industry and Services

Client

Type and Size of Organisation Behind the Profile

Industry 250-499

Year Established

2003

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

Turkish
English
German
Russian
French

Client Country

Turkey

Partner Sought

Type and Role of Partner Sought

- Type of partner sought:
Industry, R&D Institute, SME, University
- Specific area of activity of the partner:
Fully or semi-autonomous drone and its technology provider (mainly hardware)
- Task to be performed by the partner sought:

Propose novel drone technologies to be employed in perimeter security applications
The partner is sought for cooperation in co-development of the drone technology applications (software Turkish company, hardware partner company) through a commercial agreement with technical assistance, license agreement or technical cooperation agreement.

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

License agreement
Commercial agreement with technical assistance
Technical cooperation agreement