

The graphic features a stylized globe with a grid of dots and lines, overlaid on a city skyline silhouette. The text 'enterprise europe' is written in a white, lowercase, sans-serif font across the bottom of the graphic.

enterprise europe

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Research & Development Request

Eurostars: SME sought for the development of a pyrolysis pilot plant for treatment and valorisation of wastes

Summary

A Spanish SME active in technology and environmental services is working on a project proposal for the next cut off date of the Eurostars Programme, aimed at designing and starting-up a pyrolysis unit, at a pilot scale. The input for the plant would be the digestate obtained as a result of the anaerobic digestion process for biogas generation. The consortium is almost closed and it needs an SME from Europe with capacity for the design, production and execution of a pyrolysis pilot plant.

Creation Date 29 January 2016
Expiration Date 10 February 2017
Reference RDES20160129001

Details

Description

A Spanish company, actively involved in technology and environmental services, in innovation and development of projects related to Bio-Diesel, Bio-Gas, Bio- Mass, Bio-Ethanol, oil extraction from oleaginous seeds, CO₂ capture and betterment of energy usage, is working on a project proposal which aims at the design and starting-up of a pyrolysis unit at a pilot scale. The input for the plant would be the digestate obtained as a result of the anaerobic digestion process for biogas generation.

The proposal will be submitted to the next cut off date of the Eurostars Programme.

Eurostars programme framework conditions: decentralised funding (funding to approved projects is managed by the Eurostars member countries according to national funding rules and procedures).

EOI deadline: April 30th 2016.

Call deadline: September 15th 2016.

Project duration: 24 months.

The partner sought is an SME from Europe with capacity for the design, production and execution of a pyrolysis pilot plant.

Stage of Development

Proposal under development

Keywords

Technology

02004	Plant Design and Maintenance
02006006	Construction engineering (design, simulation)
03002	Process Plant Engineering
04005006	Solid biomass
04006	Biogas and anaerobic digestion (AD)

Market

06001006	Chemicals and materials
06001007	Other oil and gas
06002	Power generation
06003008	Other alternative energy
06003009	Biomass and Biofuels

NACE

F.42.2.2	Construction of utility projects for electricity and telecommunications
F.42.9.9	Construction of other civil engineering projects n.e.c.
F.43.2.9	Other construction installation

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

SME with capacity for the design, production and execution of a pyrolysis pilot plant.

Type and Size of Partner Sought

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

Type of Partnership Considered

Research cooperation agreement

Technology Offer

Inexpensive device to control the connection of plugs to the electrical installation

Summary

A Catalan SME has developed a cheap smart socket to control the use of electricity. It does not require any modification of the electrical installation. This socket can be locked in OFF position (no electrical flow, and mechanically prohibiting connection/disconnection of the device) or in ON position (preventing disconnection of the device, accidentally or from an unauthorized user). The company is looking for a partner interested in a license agreement.

Creation Date 26 January 2016
Expiration Date 23 February 2017
Reference TOES20160125001

Details

Description

Plugs and sockets are devices that allow electrically operated equipment to be connected to power supply.

The plug is the movable connector (male) attached to an electrically operated device's mains cable, and the socket is fixed on equipment or a building structure and connected to an energized electrical circuit (female).

When the plug is inserted into the base, the electrical connection between both elements allows the free use of any electrical device.

One problem, in both domestic and industrial areas, is the risk of free use by non-authorized people when referred to permanently plugged tools, or inappropriate moments.

Other concerns are the untimely disconnections of devices which may occur accidentally (moving a machine) or not (malicious intent) causing tremendous damages.

The regulation is particularly complex since anyone able to connect the appliance plug can use the device.

The Barcelona based private SME, with background in solutions in various sectors, has started to develop this solution for domestic control of electric machines and devices.

The developed system uses a mechanical lock to temporarily disconnect the electricity flow and, at the same time, avoids the disconnection from the socket preventing the possibility of connecting the machine or device to another free base.

The mechanical and electrical locking can be accomplished simply by security code or by key. As well as the mechanical release of the plug and the electrical connection re-establishment.

The use of the key or code security can only be performed by authorized personnel with said key or code.

The system can be used with AC and DC connectors

The partner sought should be an Industrial company, related to electric materials or machinery, interested in the manufacturing and commercialization of the product through a license agreement.

Advantages and Innovations

- Convenient product to control the use of electric machines and devices.
- Improves the security in the use of dangerous electric tools.
- Avoids the use of machines and devices by non-authorized people.
- Avoids untimely disconnections of electrical devices
- Reduces the risk of electric shock at home by inappropriate use of electric appliances.
- Does not, require any modification of the electrical installation

Stage of Development

Prototype available for demonstration

IPR Status

Patent(s) applied for but not yet granted

Profile Origin

Private (in-house) research

Keywords

Technology

02002009	Machine Tools
02006004	Installations related to construction (energy, lighting, ...)
03010	Household Goods & Appliances
04001004	Transmission of electricity
04007001	Energy management

Market

07004003	Home furnishing and housewares
08003006	Power transmission equipment (including generators & motors)
09004001	Business products and supplies
09008001	Electric companies

NACE

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.

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

Industrial partner, related to electric materials or machinery, interested in the exploitation of the know-how and the manufacturing and commercialization of the product through license 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

Technology Offer

Photoelectrocatalytic microreactor for wastewater treatment, gas treatment, determination of chemical oxygen demand, or selective synthesis of organic molecules

Summary

A Slovenian research institute has developed an inventive design of the photoelectrocatalytic reactor for wastewater treatment, gas treatment, determination of chemical oxygen demand, or selective synthesis of organic molecules. The invention enables cheaper fabrication and higher photocatalytic activity. The research institute is looking for partners for license agreement and for technical cooperation.

Creation Date 17 February 2016
Expiration Date 28 February 2017
Reference TOSI20160217001

Details

Description

Photoelectrocatalytic oxidation with titanium dioxide (TiO₂) photocatalyst is considered to be a suitable choice for relatively cheap and efficient elimination of organic pollutants from a variety of media, such as wastewater, polluted groundwater, toxic industrial wastes, and polluted air. Furthermore, photoelectrocatalysis can be successfully applied as an efficient route for the selective synthesis of organics or determination of chemical oxygen demand.

Photocatalytic reactors can be classified based on the deployed state of the photocatalyst, i.e., suspended or attached. Slurry reactors have suspended TiO₂ nanoparticles and therefore require separation and recycling of the TiO₂ nanoparticles from the treated water, which is an expensive and time-consuming process. Much more simple and cost-effective operation can be achieved with continuous flow photoelectrocatalytic reactors with an immobilized photocatalyst. Such a device exhibits two primary advantages: there is no post separation of the photocatalyst needed and photocatalytic activity is significantly enhanced by the application of the external electrical potential. Another important advantage is that scale-up can be replaced by numbering-up of the microreactor device, which is previously optimized on laboratory scale to meet industrial needs. In this way, capacity of the microreactor system for water treatment is simply magnified by adding additional units to the existing system.

The present invention provides a reactor made of a housing with a cylindrical chamber and an inlet and outlet channel. Within the chamber is a glass rod with photoanode coil and metallic cathode coils wrapped around it. Photoanode is made of anodized titanium coil and is illuminated by UV light from top and the bottom in a way all the surface of the titania nanotubes

is reached by the light. The main innovation of the photoelectrocatalytic device is in its design. One of the important difference from known reactors is in the relation between the active unit and the chamber. In the case of the present invention the active unit is positioned within the chamber but is not integral with it. This means that the housing and the active unit can be made separately which saves time and cost of the fabrication and also allows the replacement of the active unit alone if it is needed.

Since the technology aims to reach its full potential in an industrial setting, industrial partners are sought, in the field of wastewater and sewage treatment and gas treatment, as these are fields in need of such a technology. Furthermore, determination of chemical oxygen demand or synthesis of organic molecules represent another possible fields where the technology finds use. License agreements and / or agreements for technical cooperation will enable the researchers to maintain their focus on the research behind the technology whereas up-scaling to industrial level will be carried out in the industrial partner's setting.

The inventors are internationally recognized experts in the area of nanostructured materials focused on inorganic materials with specific physical properties that are a consequence of their structural and chemical phenomena at the nanostructural and atomic levels. Their fields of research involve natural and manufactured ceramic materials as well as metals and intermetallic compounds. In the past few years they have focused on development and characterization of photocatalytic and photoelectrocatalytic microreactors for use in water purification. They have developed three different reactor designs, one of which is described in this document.

Advantages and Innovations

Innovative design constitutes of semiconducting anode coil and metallic cathode coils wrapped around a glass rod and put into a channel in the plastic housing. The photoanode is illuminated from the top and the bottom by energy-efficient UV LED lights. The main advantages of the photoelectrocatalytic microreactor are:

- High photocatalytic surface-to-volume ratio enables very fast, continuous oxidation of organics
- Cheap and fast fabrication; all the components are made separately and in the end assembled into the final device
- Photocatalytically active anode coil constitutes of rigidly attached titanium nanotubes that are grown by industrially known anodic oxidation process
- There is no need for post-separation and recovery of the photocatalyst as it is immobilized
- Photoelectrocatalytic device can be easily scaled-out, scaled-up, or numbered-up
- Device can be optimized in a research laboratory for a specific use
- Low treatment cost compared to other advanced oxidation processes; electricity consumption during the operation is low and can be supplied from the renewable sources
- No addition of harmful chemicals and no harmful products, which makes the technology a green one

Stage of Development

Under development/lab tested

IPR Status

Secret Know-how, Patent(s) applied for but not yet granted, Exclusive Rights, Copyright

Profile Origin

Private (in-house) research

Keywords

Technology

02002016	Microengineering and nanoengineering
03001001	Cleaning Technology
05005	Micro- and Nanotechnology
10004001	Industrial Water Treatment
10004006	Sludge Treatment / Disposal

Market

08004001	Air filters and air purification and monitoring equipment
08004003	Water treatment equipment and waste disposal systems
08004004	Other pollution and recycling related
08005	Other Industrial Products (not elsewhere classified)

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

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

Industrial partners are sought, preferably providers of solutions for wastewater and sewage treatment, gas treatment, determination of chemical oxygen demand or synthesis of organic molecules.

It is expected that industrial partners are able to further develop and apply the technology in their existing line of products or use the technology as a complementary system for the decommissioning of micro-pollutants. License agreement and agreements for technical cooperation are sought.

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement
Technical cooperation agreement

Technology Offer

Hydraulic pressure intensifier solutions for hydraulic systems

Summary

The hydraulic pressure intensifier solutions are designed and manufactured by a small Danish company located near Copenhagen. The company is offering a technology solution to OEM partners that makes it possible to achieve a higher out put pressure from a low pressure hydraulic power source in a energy-saving and cost-efficient way. The company is ready for closer OEM partnerships under a commercial agreement with technical assistance.

Creation Date 03 February 2016
Expiration Date 28 February 2017
Reference TODK20160203001

Details

Description

The company was founded in 2001 and is today privately owned by the founder. Located in Denmark near Copenhagen the company designs, develops, tests and assembles compact hydraulic pressure intensifier solutions for customers worldwide. The main market is today Germany but the company also cooperates with more than 40 sales partners around the world.

The concept of the compact pressure intensifier solution dates back to the nineties, so the production knowledge and application experience of the intensifier solutions are more than 25 years old. Pressure intensifiers are used to generate a higher pressure from a low pressure hydraulic power source. The intensifier principle is based on the piston principle, where a larger diameter piston pushes a smaller diameter piston, thus increasing the pressure by a factor equal to the ratio of the larger diameter area / smaller diameter area. The outlet pressure will therefore always be proportion with the pressure applied. The hydraulic system controlling the piston movement, allows this to be up to 20 Hz during pressure build up, during which the intensifier delivers continuous flow. When the end pressure has been reached, the piston movement stops. In case of a pressure drop on the high pressure side, the intensifier will automatically start working to maintain the pressure. The compact pressure intensifiers all have high pressure valves integrated.

The company is looking for OEM partners that can integrate the energy saving pressure intensifiers in their hydraulic systems via a commercial agreement with technical assistance. The OEM's will be able to downsize their power source and still achieve the hydraulic pressure needed or even achieve a higher hydraulic pressure to improve the performance of their application.

Advantages and Innovations

The compact hydraulic pressure intensifiers offer an easy, energy-saving, safe and cost-efficient solution to achieving higher output pressure from an existing low-pressure hydraulic power source. Low pressure supplied to the inlet ports – e.g. 15-200 bar/218-2,900 psi – is transformed to high pressure at the outlet port – from 30-4,000 bar/435-58,000 psi. The pressure intensifiers are made of cast iron and steel as well as in stainless steel.

Companies using this in their hydraulic systems can save energy in their production processes as well as obtain higher pressure performance.

Stage of Development

Already on the market

IPR Status

Design Rights

Profile Origin

Private (in-house) research

Keywords

Technology

03003 Apparatus Engineering

Market

08003007 Other industrial equipment and machinery

NACE

C.28.1.2 Manufacture of fluid power equipment

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

- Type of partner sought:

OEM = Original Equipment Manufacturer of machinery/equipment which includes a hydraulic system

- Specific area of activity of the partner:

None - open to all type of industries...

Examples of machinery/equipment: hydraulic tools, hydraulic work holding tools, hydraulic metal

Type of Partnership Considered

Commercial agreement with technical assistance

Technology Offer

Novel technology for optimizing production in continuous-casting steel plants

Summary

A research team at an Italian university developed a novel solution for optimizing the production process in continuous-casting steel plants: a specialized set of algorithms to plan and control production, using advanced control systems engineering techniques, improves management of resources shared by different workflows, reducing production times. The group is looking for industrial partners for further testing and industrializing the solution within research, technical or services agreement.

Creation Date 26 January 2016
Expiration Date 15 February 2017
Reference TOIT20160126007

Details

Description

The main problems related to control and optimization in automated industrial processes concern the management of operation sequences and of workflows and the synchronization of equipment for the handling of materials. Process optimization is particularly relevant in continuous-casting steel plants, where the management of overall production times depends significantly on the correct use of equipment to handle materials (ladles, baskets, overhead cranes), which equipment may have restricted availability (due to maintenance or refurbishment) or mobility (due to reciprocal interference) leading to complex management issues.

An Italian university research group utilized in-depth specialized know-how to develop a novel series of algorithms to plan and control production, using advanced control systems engineering techniques for resource management. The proposed solution is able to model, using dedicated theoretical tools, the sequencing and scheduling of automated productive processes.

The application, currently under development, for continuous-casting steel plants intervenes in a combined manner on the control of processing times, to prevent premature solidification, and on the optimization of transport and handling flows of raw and semi-finished materials.

The university is currently looking for industrial partners for further testing and validating the proposed solution. Potential collaboration include License and Services agreement as well as Research and Technical Cooperation agreement.

Advantages and Innovations

The solution has a significant component of specialized know-how combined with a high level of adaptability and customization of the production planning and control techniques used.

The concept can be integrated into automating and control systems already in place: its application requires neither the development of dedicated instruments nor any structural modifications to existing facilities.

Reference market for the proposed solution is the manufacturing of automation and control systems, a constantly growing market segment and a key element for the efficient and profitable management of industrial plants.

End markets for the technology are steel plants, which see process automation as one of the driving forces behind technological development, both in terms of the integrated management of the equipment and machinery involved, and in terms of the control of complex transformation processes.

Stage of Development

Concept stage

IPR Status

Secret Know-how

Profile Origin

National or Regional R&D programme

Keywords

Technology

02003001	Process automation
02007008	Iron and Steel, Steelworks
03002	Process Plant Engineering

Market

08002003	Process control equipment and systems
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NACE

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

Partner Sought

Type and Role of Partner Sought

The research team is looking for industrial partners for further testing and validating the proposed solution.

Potentially interested partners in the development and integration of the technology include:

Partnering Opportunity

- manufacturers and integrators of industrial automation and production control systems
- engineering companies and manufacturers of 'turnkey' industrial plants
- manufacturers of steel and metal plants.

Various cooperation options available based on partners' specialization and market interest, including License and Services agreement, Research and Technical Cooperation agreement.

Type of Partnership Considered

- Services agreement
- License agreement
- Technical cooperation agreement
- Research cooperation agreement

Technology Request

Antibacterial coating service sought for lever handles to be used for sanitary applications

Summary

A Lithuanian company specialized in design and manufacturing of a wide range of lever handles that are also used for sanitary applications is looking for new coating services on their final products that could guarantee strong antibacterial effect for a longest period of time possible. Novel as well as already-on-the-market services are sought for a commercial agreement with technical assistance or manufacturing agreement.

Creation Date 19 February 2016
Expiration Date 20 February 2017
Reference TRLT20160219001

Details

Description

The Lithuania SME is currently active in designing and manufacturing wide range of lever handles that are also used for sanitary applications. The SME is looking for a high-performance and cost effective coating services to guarantee strong antibacterial effect for a longest period of time possible.

Current challenges related to the coatings used are related to the limited antibacterial properties as well as limited lifetime due to heavy use of the product.

Further details are included in the technical specifications section.

Developers of such antibacterial coating technologies should be able to offer the full service that is sought under commercial agreement with technical assistance or manufacturing agreement.

Technical Specification or Expertise Sought

The Lithuanian SME is looking for :

- Antibacterial coating that could have as many as possible effects (for instance a set of antimicrobial , antivirotic and antimycotic effects);
- The perfect coating should be as neutral/transparent as possible in order to maintain the visual properties of lever handles unchanged.
- The perfect coating should be wear resistant and should guarantee strong antibacterial effect for a longest period possible
- It should be possible to coat different in quantities of lever handles, the production happens in various batches (10 - 3000 units).
- The coating service should be economically feasible and shouldn't last for more than 2 weeks.

Expertise to be sought regards :

- Antibacterial coating service

- Tests of coating performance on the SME specific application
- Technical integration of the antibacterial coating service in the SME production process

Stage of Development

Already on the market

Keywords

Technology

02002002	Coatings
02002015	Surface treatment (painting, galvano, polishing, CVD, ..)
03001001	Cleaning Technology
06001018	Virus, Virology/Antibiotics/Bacteriology
10003001	Biotreatment / Compost / Bioconversion

Market

07004005	Furnishing and Furniture
07004008	Other consumer products
08005	Other Industrial Products (not elsewhere classified)

NACE

C.25.1.1	Manufacture of metal structures and parts of structures
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Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The partner sought is expected to provide the SME with expertise and service on antibacterial coating service

The partner is expected to work closely with the SME in order to introduce new antibacterial effects to the lever handles

Type of Partnership Considered

Manufacturing agreement
Commercial agreement with technical assistance

Technology Request

New ecological anti-sound wall panels are sought

Summary

A Lithuanian company works in the area of road construction and is looking for new ecological anti-sound wall panels. The company is looking for the partnerships that enables development and implementation of anti-sound wall panels (placed near the highways and other noisy environments to reduce the level of traffic sound) from ecological materials. Novel as well as already-on-the-market solutions are sought for a commercial agreement with technical assistance or manufacturing agreement.

Creation Date 25 February 2016
Expiration Date 25 February 2017
Reference TRLT20160223001

Details

Description

A Lithuanian company works in the area of highway and road construction and seeks to develop the ecological anti-sound wall panel.

Anti-sound wall panels are placed on the sides of the highways and other noisy environments in order to reduce the level of traffic sounds reaching the buildings that are situated near these highways. The company has extensive practice installing these panels.

There are many different types of anti-sound wall panels, however, any economically viable eco-based solution did not reach the market yet. The company is looking for the partners that could develop and manufacture anti-sound wall panel from ecological materials - recycled, reused, environment-friendly etc.

Technical Specification or Expertise Sought

Proposed solutions should be based on ecological materials (for example - recycled, reused, environment-friendly etc.) only. The technology should allow to develop commercially viable solution.

Stage of Development

Concept stage

IPR Status

Other

Keywords

Technology

02006001	Materials, components and systems for construction
02006005	Construction maintenance and monitoring methods & equipment
02007002	Building materials
03007	Sound Engineering/Technology

Market

09004008	Other manufacturing (not elsewhere classified)
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.41.2.0	Construction of residential and non-residential buildings
F.42.1.1	Construction of roads and motorways
F.42.1.2	Construction of railways and underground railways

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The partner sought is expected to provide the SME with expertise and solution on anti-sound wall panel from ecological materials
The partner is expected to work closely with the SME in order to introduce/implement novel anti-sound wall panel from ecological materials.

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

Manufacturing agreement
Commercial agreement with technical assistance

Medidas y Normas

Research & Development Request

FAST TRACK TO INNOVATION: Companies or technological centres for the manufacturing of confocal fluorescence microscope with miniaturization capacity

Summary

A Spanish research centre specialized in the field of health sciences is looking for partners for a Fast Track to Innovation Pilot proposal. The objective is the development of a new micro installation in order to test the cytotoxic capacity of antitumor compounds in microgravity. They are looking for companies or technological centres with capacity of manufacturing a confocal fluorescence microscope with miniaturization capacity.

Creation Date 10 February 2016
Expiration Date 25 February 2017
Reference RDES20160210001

Details

Description

A Spanish research centre is specialized in the field of health sciences. The centre was born in 2007 and has a total building surface area of 12,137 m², of which more than 4,000 m² are directly devoted to research activities. The facilities are vital for research advances in the field of genomics, proteomics and transcriptomics.

The centre has a research area in the field of oncology which is on the constant search for improvements in cancer treatments. Some scientific advances have shown promising developments in the fight against cancer using techniques as microgravity. The centre is preparing a project proposal to a Fast Track to Innovation call. The aim of the project is the development of a new micro installation in order to test the cytotoxic capacity of antitumor compounds in microgravity. For the successful development of the project, the centre is looking for partners, companies or technological centres, with technical capacity for the manufacturing of a confocal fluorescence microscope with miniaturization capacity.

The proposal is coordinated by the Spanish research centre and is currently gathering three other industrial partners.

Call deadline: 1st June 2016.

Deadline for receiving expressions of interest: 1st May 2016.

Project duration: 2 years.

Technical Specification or Expertise Sought

The partner should have technical capacity for the manufacturing of a confocal fluorescence microscope with miniaturization capacity. This microscope should capture and analyze fluorescent images (in red and green areas of the spectrum) and should allow the automatic input and output of the cameras in the experiment.

Stage of Development

Proposal under development

Keywords

Technology

06001012	Medical Research
06001013	Medical Technology / Biomedical Engineering
09001002	Analyses / Test Facilities and Methods
09001007	Optical Technology related to measurements
09001009	Sensor Technology related to measurements

Market

03007002	Other measuring devices
03007003	Other analytical and scientific instrumentation
05007006	Computer-aided diagnosis and therapy
08002002	Industrial measurement and sensing equipment

NACE

M.72.1.1	Research and experimental development on biotechnology
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Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

Type of partner sought: Industry, technological centre.

Specific area of activity of the partner: Manufacturer of confocal fluorescence microscopes.

Task to be performed: The searched partner should collaborate in the manufacturing of a miniature microscope. This microscope should capture and analyze fluorescent images (in red and green areas of the spectrum) and should allow the automatic input and output of the

cameras in the experiment.

EU / International project experience: Previous experience in international projects development is not necessary but will be positively evaluated.

Type of Partnership Considered

Research cooperation agreement

Technology Offer

Ultra-compact tunable fibre laser technology from Japan for licensing in the EU

Summary

A Japanese company is offering a licensing opportunity for a tunable laser. The laser system enables to downsize to 50mm (visible wavelength) or 20mm (near infrared) while a conventional system is over 100mm. The company is a technology transfer entity looking for EU partners interested in the commercialisation of research results which come from Japanese top universities. A licensing agreement will be considered with relevant partners with possibility of research cooperation.

Creation Date 04 February 2016
Expiration Date 28 February 2017
Reference TOJP20160203001

Details

Description

A Japanese company, specialised in technology transfer, is offering a licensing cooperation opportunity for tunable laser to partners in Germany (main target) and other EU countries.

The company is a technology transfer entity which handles around 500 inventions on an annual basis and is under a general contract with 10 Japanese universities. They are mandated to represents the universities in the licensing of newly developed technologies.

The company offers the technology of Ultra-Compact Tunable Fibre Laser.

The laser system enables to downsize to 50mm (visible wavelength) or 20mm (near infrared/IR wavelength) while a conventional laser system is over 100mm.

The system has a simple selection mechanism: for example, wavelength tunability of 20 nm is obtained by 130µm of output mirror linear adjustment. It is not possible to achieve the same result with a conventional mechanism such as a slit or mirror with an angle adjuster for the selected wavelength.

Tunable lasers are widely used in many applications, for example: medicine (surgical laser, photodynamic therapy or OCT (Optical coherence tomography), biology (Raman spectroscopy, flow cytometry) and optical measurement Systems (Atmosphere Radar).

They are looking for an industrial partner of any size in Europe with knowledge in the laser sector who would work together with them for the commercialization of this technology.

They mainly offer a licensing agreement for commercial use of the technology, but a research

cooperation agreement may also be considered although not a priority for the moment and will be considered if the partner has a proven R&D knowledge in the laser technology.

Advantages and Innovations

The company is offering Ultra-Compact Tunable Fibre Laser technology utilising the chromatic aberration of the lens with the following features:

- Simple configuration with no grating or prism
- Compact laser system: succeeded in downsizing to 50mm (visible wavelength) or 20mm (close to infrared wavelength)

The technology has been developed to focus on downsizing. In conventional tunable laser systems, a spectroscopic part such as a grating or a prism is essential. These spectroscopic parts are recognised as a bottleneck for downsizing. Their design achieves ultra-compact tunable fibre laser system by removing conventional spectroscopic systems.

The technology enables the below characteristics:

1) More Compact

GRIN (Gradient-index) lens can substitute aspheric lens relay. It decreases the number of lenses compared to conventional products and shorten the cavity length.

2) Simple selection mechanism

Output mirror can be adjusted by a piezo based positioner (For example: Microminiature ultrasonic linear actuator).

3) Multiple use:

The core materials for the desired central wavelength can be chosen.

- Praseodymium (Pr) doped fibre laser (central wavelength (CW): 480nm, 520nm, 575nm, 605nm, 640nm, 720nm, 1300nm)
- Neodymium (Nd) doped fibre laser (CW: 900nm, 1060nm),
- Ytterbium (Yb) doped fibre laser (CW: 1060nm),
- Erbium (Er) doped fibre laser (CW: 500nm),
- Thulium (Tm) doped fibre laser (CW: 2000nm).

Putting a saturable absorber such as a graphene, on the output mirror (red circle in the attached figure), the laser can operate as a nano second Q-switch pulse mode or mode-locked tunable laser.

The utilisation of an amplifier improves output power for laser beam machining.

4) Compact Fibre medium

In visible range they can use 40mm waterproof fluoride glass as a laser medium. In near infrared range, the inventor already demonstrated 4 mm length Neodymium (Nd)-doped fibre laser. This short fibre was made by zeolite method.

Stage of Development

Prototype available for demonstration

IPR Status

Patent(s) applied for but not yet granted

Keywords

Technology

01002008 Optical Networks and Systems
09001007 Optical Technology related to measurements

Market

03005 Laser Related

NACE

S.96.0.9 Other personal service activities n.e.c.

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The company is looking for industrial EU partners of any size with activities in the tunable laser sector that would be interested to start the commercialisation of the proposed new technology under a licensing agreement.

Should the EU partner have an R&D department in the laser technology they may also consider a research cooperation agreement to further develop the laser system although at this stage the licensing agreement is the main objective.

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement
Research cooperation agreement

Technology Offer

High frequency impulse measurement (HFIM) technology to measure cracks in real-time during metal processing

Summary

A German SME developed a new high frequency impulse measuring system that detects cracks during machining, welding, forming or other production processes. The process is adjusted to the workpiece. The measurement system is able to interrupt the production process automatically in case of failure. Thus maintenance costs and scrap are significantly reduced. They seek partners to implement the technology via commercial agreements with technical assistance and for research for new applications.

Creation Date 09 February 2016
Expiration Date 23 February 2017
Reference TODE20160209001

Details

Description

In straightening press processes, a stamp pushes against a clamped workpiece and bends it. This produces high pulling and thrust forces which can lead to a crack. In that case a shockwave runs through the workpiece and the machine tools causes vibrations in connected machine parts.

A German SME developed a new high frequency impulse measuring system that detects cracks and structural changes during machining, welding, bending and straightening, wire-drawing, forming or numerous other production processes.

The measuring process is adjusted to the workpiece. The measurement system is able to interrupt the production process automatically in case of failure. Thus maintenance costs and scrap are significantly reduced. Measurement computers render it possible to evaluate many production processes, to detect cracks in the very moment they occur and to check if production parameters stay inside tolerance thresholds:

- crack detection
- raise life time of tools
- Tool monitoring
- Process optimization

Broadband vibration sensors pick up the acoustic emission signals on the surface of the machine parts. Thanks to sensor and pre-filtration technology, ratio between signal and noise is very good.

If a crack occurs in a workpiece, this emits a certain kind of signal. This signal is characterized roughly by three properties: steep start, broadband and smooth finish.

With every workpiece exchange, the device performs a self-test. It checks the pre-amplification chain and the connection as well as the coupling of the sensor itself. It is possible to save threshold values and pre-amplification settings on every measuring position and workpieces. The sensors are capable of detecting signals up to 25 MHz. The machine does 25.000 spectral analyses per second.

The company is looking for industrial partners interested to implement the technology within the framework of commercial agreements with technical assistance. The German company would accompany the adjusting process.

There is also an interest in common research projects with industrial or research partners for the development of new applications.

Advantages and Innovations

Innovation:

Optical measurement systems that are often applied in order to analyse product quality cannot detect cracks that are closed at the surface of the product.

Unlike conventional methods, this new crack detection system works during the process, in real-time. That means the production process can be interrupted immediately in case of failure.

Damaged workpieces can be more easily and accurately be separated from non-damaged workpieces. The data provided allows the optimization of the production process and to reduce scrap. Additionally, it's possible to detect tool wear and to optimize the whole process – for example, to lengthen maintenance cycles or to eliminate sources of trouble.

Advantages of the measurement system are:

- Optimal signal detection and pre-filtering of noise like mechanical or electrical noise
- Measuring is adjusted to the workpiece, tool and process
- Availability of the device is constantly monitored by complex self-testing functions
- Measuring data is stored and can be used later for statistical evaluation
- High reliability

Stage of Development

Already on the market

IPR Status

Patents granted

Keywords

Technology

02002005	Forming (rolling, forging, pressing, drawing)
02003005	Information processing & Systems, Workflow
02007010	Metals and Alloys
09001001	Acoustic Technology related to measurements
09001009	Sensor Technology related to measurements

Market

08002002	Industrial measurement and sensing equipment
08003001	Machine tools, other metal working equipment (excl. numeric control)
08003005	Other industrial machinery for textile, paper & other industries
08003007	Other industrial equipment and machinery
08005	Other Industrial Products (not elsewhere classified)

NACE

C.24.2.0	Manufacture of tubes, pipes, hollow profiles and related fittings, of steel
C.24.3.3	Cold forming or folding
C.24.4.1	Precious metals production
C.25.1.1	Manufacture of metal structures and parts of structures
M.72.1.9	Other research and experimental development on natural sciences and engineering

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The German company is looking for partners interested in implementing the technology and in common research projects for the development of new applications:

Industrial partners to implement the technology are sought from metal processing industry, i.e., automotive, machine engineering, shipbuilding and metal working. The German company would accompany the adjusting process with know-how transfer and advice.

As there are still new application opportunities for this technology the company is also interested in cooperation with research organizations for the development of new solutions e.g. in smart manufacturing (Industry 4.0), Internet of Things (IoT) and others.

Type of Partnership Considered

Commercial agreement with technical assistance
Research cooperation agreement

Technology Offer

French research and development center of plastics and composite materials seeks research cooperation agreements.

Summary

A French R&D centre specialised in plastics and composite materials offers its 30 years old expertise to industry and research. The R&D centre is offering a wide range of services in terms of applied or fundamental research in processes and materials in plastics, polymers and composites. The center is interested in research cooperation agreements, technical cooperation agreements and license agreements.

Creation Date 26 January 2016
Expiration Date 11 February 2017
Reference TOFR20160126001

Details

Description

A French research institute specialized in plastics and composite materials offers its expertise, design assistance and consulting to industry and research. The French research and development centre's research focuses on four main technical sectors.

First, research focuses on surface and interface phenomena through a patented method of metalizing a non-conductive plastic substrate. Expertise also includes the development of polymer mixtures and formulation allowing performance and lightweight of thermoplastic materials for transport. The centre is also specialised in materials for energy efficiency in transports.

Other priority of the centre is research on the relationship between the materials development and final properties; it focuses on the substitution of Virgin material by recycled material from end-of-life vehicle (ELV).

The R&D centre finally develops bio-sourced and recycled materials focusing on recycling of polymers, on development of multi-layer bio-sourced films or bio-sourced films using blends, on processing of PLA (polylactic acid) -improvement of thermo-mechanical properties and on study of aging of PLA and surface treatment of PLA.

In practice, the institute can offer the following services to industry:

- Compounding,
- Formulation of thermoplastics
- Optimization of thermoplastic material processing, improvement of material physical properties;

- Development of formulations, hybrid materials (hollow glass microspheres, metal);
- Formulation and processing of bio-sourced materials;
- Design and rapid prototyping;
- Chemical Analyses;
- Component analyses;
- Physical and chemical analyses;
- Behaviour studies;
- Mechanical and rheological analyses.

The R&D center is equipped with a BUSS mixer, a twin-screw extruder fitted with two side feeders, liquid injection systems, a twin-screw extruder of laboratory (450°C maxi), haake mixer, Injection presses, extrusion lines, an extrusion blow-moulding machine, a blown film machine, an extrusion sheet line and thermoforming machines.

This laboratory works in close collaboration with the technology transfer center; this is the reason why all the research topics are directly linked to industrials' needs.

The R&D centre proposes services to industrials coming mainly from automotive, transport and aeronautics sectors but also from food packaging and construction materials sectors and needing to integrate R&D into their products and projects development processes. They are interested in research cooperation agreements with industry but also with research institutes. They are also open to collaborate in the frame of EU projects such as Horizon 2020 projects.

Advantages and Innovations

The R&D centre's key strength lies in its capacity to bridge the gap between formulating polymer materials and their final processing and end-product.

Stage of Development

Under development/lab tested

IPR Status

Other

Keywords

Technology

02007005	Composite materials
02007014	Plastics, Polymers
02007019	Lightweight materials
09001002	Analyses / Test Facilities and Methods
10003004	Recycling, Recovery

Market

08001004	Fibre-reinforced (plastic) composites
08001006	Processes for working with plastics
08001018	Polymer (plastics) materials
08004002	Chemical and solid material recycling
09003001	Engineering services

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

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The R&D centre would like to collaborate with industrials (mainly coming from the automotive, aeronautics, food packaging and construction materials sectors) wanting to develop projects and products including new polymers materials such as composite or thermoplastics materials.

They are also interested in collaborating with universities or labs looking for skills in polymers characterization, formulation or processing.

The centre is interested in research cooperation agreements and technical cooperation agreements. They are also open to collaboration under EU projects.

Type and Size of Partner Sought

University,R&D Institution,251-500,SME 51-250,>500

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Technology Offer

Online load control for pipe jacking

Summary

A German SME offers an online load control quality assurance system that helps to avoid damage to jacking pipes. Using special measuring devices the angular deflection between selected pipes is measured and the permissible jacking force is calculated, allowing to take countermeasures. The system prevents overloading of jacking pipes and recognizes problems on site at an early stage. Data and analysis are accessible online. Partners are sought for commercial agreements with technical assistance.

Creation Date 11 February 2016
Expiration Date 17 February 2017
Reference TODE20160211001

Details

Description

The stress of jacking pipes caused by installation progress is largely determined by the amount of jacking forces, but also by the angular deflections of jacking pipes as a result of machine countermeasures. A prevalent cause of damages to jacking pipes is an overload of the pipe material inside the pipe joints.

Research results of a German university have shown that especially the material behaviour of the pressure transfer rings, arranged for the dispensation of pipe jacking forces, have a high impact on the dispensation of compressive stresses inside the joint between jacking pipes. The wood-based materials solidify with increasing jacking length due to the high number of load cycles. Hereby the basic ability to disperse the high jacking forces in the joint between the pipes is lost to some extent. The consequences are high stress spikes and local exceedance of the compressive strength. As a result, spalling, delamination or cracking of jacking pipes can occur.

A spin-off company of this German university now offers a system and solution based on these research results:

By use of special measuring devices, the angular deflections at selected pipe joints can be determined by measuring the joint between the pipe faces at four positions during jacking-process. Simultaneously the hydraulic pressure to the cylinders at the main and intermediate press stations and in addition included the extension lengths of the intermediate stations are recorded. The measured values are transmitted via converter to the evaluation software, set up on screen display inside the press container to provide all data to the machine operator and all project participants.

The use of the monitoring system ensures that the jacking pipes do not get overloaded during the installation process so that high costs caused by pipe damages can be avoided. By determining a possible overloading of the jacking pipes, the utilization is signaled so that

countermeasures (angle corrections, use of intermediate jacking stations or additional greasing) can be taken.

All measured and calculated jacking data will be documented gapless and serve to demonstrate pipe jacking without damages. By installing the online load control (OLC) system and the subsequent commissioning, the work on construction site is not hindered. Because of no significant changes to the jacking pipes and the machine technology, high costs can be avoided and the system can be extended quickly in critical jacking situations. The use of monitoring pipe jacking by OLC assures the client's required quality of their pipes and allows a low-risk and proven performance to the executive jacking companies on site. With the possibility to use the intermediate jacking stations when needed, OLC helps to increase the economic efficiency.

Partners are sought for commercial agreements with technical assistance. Partners could be public sector, civil and underground engineering, construction, pipe jacking....
The German company can offer installation and monitoring service or transfer operating know-how and train the partner's staff.

Advantages and Innovations

- Avoids damage to the jacking pipes at an early stage as unlike other systems, this system measures and communicates data every two seconds
- Helps to take countermeasures (angular corrections, use of intermediate station or additional greasing) when needed
- Gapless documentation and continuous reporting of all measured angular deflections and calculated jacking loads
- Graphical evaluation at every second for all project participants online
- Low costs in the range of max. 1 permille of project costs

Stage of Development

Already on the market

IPR Status

Secret Know-how

Keywords

Technology

02006005	Construction maintenance and monitoring methods & equipment
02006006	Construction engineering (design, simulation)
09001009	Sensor Technology related to measurements
10004008	Water Resources Management
10004013	Underground infrastructure

Market

09007004	Engineering and consulting services related to construction
09008002	Water, sewerage, chemical and solid waste treatment plants
09008004	Other utilities and related firms

NACE

F.42

Civil engineering

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

Partners sought:

Municipal sewer operators, network operators, building enterprises, civil and underground engineering, pipe jacking companies or application agents to implement the technology in their projects within commercial agreements with technical assistance. The German company is ready to support installation and offer all relevant services or to transfer operating know-how.

Type of Partnership Considered

Commercial agreement with technical assistance

Technology Offer

Inertial sensor technology for a real-time functional detection of human movement

Summary

An Italian company has developed a new inertial sensor technology to contribute to technical and scientific evaluation of the functional and physiological human movement. The device has the aim to provide the necessary data to anyone who needs to plan properly targeted training (a physical training or rehabilitation) or simply monitor the physical state of the person. The company is looking for commercial agreement with technical assistance in the fields of medical, healthcare, sports services.

Creation Date 08 February 2016
Expiration Date 26 February 2017
Reference TOIT20160205001

Details

Description

An Italian small company has developed a new inertial sensor technology for a real-time functional detection of human movement. The technology is a measurement tool able to analyze the movement of any body segment. It contains the latest generation components for carrying out accurate and repeatable measurements of acceleration, angular velocity and magnetic field in three dimensions. The device works with a Bluetooth data transmission that provides real-time measurements directly to the PC via software. Then, the software, with its scientifically validated algorithms, offers simplified data for processing and interpretation. Data could also be acquired without a PC, since the device is equipped with a MicroSD memory card.

This device allows to objectively evaluate and monitor joint functionality and muscle strength during rehabilitation phases and for training a specific area of the musculoskeletal system. It is used to quickly identify any posture deficiencies, problems or asymmetries. Thanks to the immediate delivery of the numerical values and the possibility to check periodically the obtained results and the effectiveness of the treatments, the device helps prevent relapses, complications and regressions of the disease or post-accident condition. Furthermore the sensor makes possible to perform motor movements that are more or less complex without limiting or influencing the subject, also due to the fact that it can be used outdoors and on any surface (grass, sand, unstable platforms, etc.). Consequently, It motivates the subject to constantly improve its conditions.

The company is interested to reach commercial agreement with technical assistance with partners active in medical, healthcare, sport services sector, interested to introduce the innovative device in ad-hoc structures, like post-trauma rehabilitation structures, or in rehabilitation protocols in hospitals and clinics. The company will make skills and technical services available to the potential partner. The final users could be sport or clinical professionals like orthopaedist, physiotherapists, sports science's experts or trainer.

Advantages and Innovations

Thanks to its latest generation components, the device is able to supply acceleration measurements of up to 16g and angular velocities of up to 2000°/s with an acquisition frequency of 1000 Hz. Through these characteristics, the sensor allows to obtain data on time, in outdoors conditions and on any surface.

In detail, here below some of the innovative functionalities:

- quantify the deficit in terms of joint function or muscle strength between a limb and the contralateral or between the injured limb and the same limb prior to the accident;
- evaluate and measure the subject's balance in different situations and/or on different surfaces;
- monitor the exercise intensity with real-time visual bio-feedback via a work threshold that can be selected by the user;
- trace and report the subject's recovery during the entire rehabilitation process by means of the report functionality;
- evaluate and monitor athletic performance directly in the field.

Furthermore, the device has a user-friendly software interface and, comparing with other similar existing technologies, is low cost.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Keywords

Technology

06001012	Medical Research
06001013	Medical Technology / Biomedical Engineering
06001020	Physiotherapy, Orthopaedic Technology
06005002	Sensors & Wireless products
09001009	Sensor Technology related to measurements

Market

02007012	Medical/health software
03007	Analytical and Scientific Instrumentation
05004001	Electromedical and medical equipment
05004005	Diagnostic equipment
05010003	Patient rehabilitation & training

NACE

M.74.9	Other professional, scientific and technical activities n.e.c.
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Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The partner sought should be a company interested in a commercial agreement with technical assistance. The potential partner should operate in medical, healthcare, sport services field in order to reach easily the possible final users: sport or clinical professionals like orthopaedist, physiotherapists, sports science's experts or trainer.

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 acoustic, underwater and micro seismic noise prediction company

Summary

A Greek SME is working on a simulation tool for acoustic, underwater and micro seismic noise prediction. The company is looking for an SME with similar technical expertise to provide information and experimental results in order to compare them with the simulation results. The Greek company is looking for technical cooperation agreement.

Creation Date 22 February 2016
Expiration Date 24 February 2017
Reference TRGR20160222001

Details

Description

A Greek SME, dealing with advanced simulations, is working in a project aiming to develop a demanding simulation software tool. The tool is based on accelerated Boundary Element Method (BEM). This method is well known as the ideal one for providing accurate and reliable solutions for solving multi-cracking fracture mechanics problems as well as large-scale problems dealing with infinite/semi-infinite domains, such as outdoor & underwater acoustics (e.g. infrasound, noise pollution), soil mechanics (e.g. earthquake waves, foundations, vibration isolation), radiation and scattering (e.g. radar, antennas), etc.

The software tool of the Greek company applies in two major modules, Electromagnetics and Fluid Structure Interaction. For the later module, the Greek company would like to find an SME which is working in the field of acoustic, underwater and micro seismic noise prediction. For completing the simulation tool the Greek company needs the SME abroad to provide all the necessary technical information and experimental results in order to compare them with the results given by the simulation tool. In return, when the project will be completed, the SME sought will be given for free the simulation software. The software will provide high accuracy computational results. The Greek company is looking for technical cooperation agreement.

Technical Specification or Expertise Sought

The Greek company is looking for an SME abroad with expertise in acoustic, underwater and micro seismic noise prediction. The SME is requested to provide technical information and experimental results of projects of the mentioned field.

Stage of Development

Concept stage

IPR Status

Secret Know-how

Keywords

Technology

01003006	Computer Software
01003008	Data Processing / Data Interchange, Middleware
01003016	Simulation
09001001	Acoustic Technology related to measurements
09003	Electronic measurement systems

Market

03007003	Other analytical and scientific instrumentation
06001001	Exploration services
06001004	Equipment and instrumentation
09006	Mining (non-energy related)

NACE

J.62.0.9	Other information technology and computer service activities
M.71.2.0	Technical testing and analysis
M.72.1.9	Other research and experimental development on natural sciences and engineering

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The Greek company is looking for an SME abroad with expertise in acoustic, underwater and micro seismic noise prediction. The SME will provide technical information and experimental results to the Greek company. For this reason, the required partner should have previous projects in the field with sufficient data. The partner will receive the completed software tool for free. The Greek company is looking for technical cooperation agreement.

Type and Size of Partner Sought

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

Type of Partnership Considered

Technical cooperation agreement

Asuntos Sociales y Económicos

Research & Development Request

H2020 Fast Track to Innovation (FTI): Synthesis of innovative silica based nano-particles.

Summary

A Spanish company specialized in inorganic chemistry is preparing a H2020 Fast Track to Innovation project proposal. The project is focused on feasibly up-scaling synthesis of innovative silica based nano-particles and validating them in marketable applications of the rubber industry. The consortium, comprised of a chemical manufacturer, a research centre and a multinational company of the rubber industry, is looking for two new partners: a large enterprise and an SME from the rubber sector.

Creation Date 13 January 2016
Expiration Date 18 January 2017
Reference RDES20160113001

Details

Description

A Spanish company born 50 years ago and specialized in basic inorganic chemistry is developing a project proposal for the forthcoming Fast Track to Innovation call (15th March 2016). The company manufactures sodium and potassium silicates, metasilicate, zeolites, sodium and potassium aluminates, precipitated silica, aluminum silicate and amorphous aluminum hydroxide and counts with different plants in Spain. Its products cover a wide range of physicochemical properties that make their products crucial ingredients in a large number of applications and consequently in markets like detergents, tires, construction, human and animal food, paints, varnishes, agriculture, wastewater and industrial water treatment, the paper industry, rubber, pharmaceuticals, ceramics, etc. The company is really active in R&D and innovation activities, having developed numerous R&D projects and owning several patents related to silica based products.

The aim of the project proposal is to make feasible the synthesis of silica based nano-particles barrier by developing a versatile manufacturing process for the production of diverse nanomaterials. Such a process will allow the creation of a scale economy by means of combining the synthesis of different products' in the same production plant.

This project relies on an existing and patented manufacturing process, which allows big and efficient productions of silica based nanomaterials. The process to be developed will consist of an adaptation of a chemical production plant for the manufacturing of silica-based nano-particles.

Specific project objectives are:

1. Adapting an existing production process to a versatile process for a set of silica-based nano-particles, already synthesized at laboratory scale, tested and demonstrated in relevant applications (TRL6).

2. Achieving a feasibly industrial production of a set of nanomaterials.
3. Demonstrating the technical feasibility of the industrially manufactured nanomaterials in each of the applications.
4. Analyzing the toxicology of developed nanomaterials and evaluating the grouping potential under the REACH normative.

The consortium, currently comprised of a chemical manufacturer, a research centre and a multinational company of the rubber industry, is looking for the following partners related to the rubber industry/sector:

1. One large enterprise for validating the nano-silica in a commercial application.
2. One SME for analyzing the recycling process of the new product and its environmental impact.

Call deadline: 15th March 2016.

Deadline for receiving expressions of interest: 12th February 2016.

Project duration: 2 years.

Advantages and Innovations

Using nano-particles as reinforcement fillers can enhance elastomers' (particularly TPEs and rubber) thermal and mechanical properties in a wide diversity of factors such as: wear resistance, dynamic performance, chemical resistance and material service lifetime. However, the usage of nano-materials as reinforcing fillers for elastomers is not extended due to price restrictions and production limitations. The project will try to tackle this gap.

Technical Specification or Expertise Sought

The consortium is looking for one large enterprise and one SME from the rubber industry/sector. The large enterprise should be experienced in commercial applications of rubber products (such as seals, gaskets, technical parts of vehicles...) and the SME should be able to analyze the recycling and environmental impact of rubber products with nano-additives.

IPR Status

Patents granted

Keywords

Technology

02009023	Interior equipment
03004008	Plastics and Rubber related to Chemical Technology
09001	Measurement Tools
10001002	Assessment of Environmental Risk and Impact
10002015	Life Cycle Assessment

Market

08001001	Plastic fabricators
08001018	Polymer (plastics) materials
09001005	Motor vehicles, transportation equipment and parts

NACE

C.20.1	Manufacture of basic chemicals, fertilisers and nitrogen compounds, plastics and synthetic rubber in primary forms
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Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

Two different roles are needed:

- A large enterprise of the rubber industry for validating our nano-silica in a commercial application, such as seals, gaskets, technical parts of vehicles... whose previous experience in projects will be well considered.

- An SME for:

(a) Analyzing the recycling potential of rubber including project's nano-additives.

(b) Analyzing the environmental impact of rubber including project's nano-additives.

Newcomers in EU funding are welcome.

Type and Size of Partner Sought

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

Type of Partnership Considered

Research cooperation agreement

Technology Offer

A Korea SME is introducing a chemical recycling technology for PET (polyethylene terephthalate) wastes

Summary

A Korean SME specializing in the development of eco-friendly materials and facilities has developed a chemical recycling technology for PET wastes. It is eco-friendly, economical and easy to operate. The company is looking for a partner who is interested in recycling PET and is available for technical cooperation or joint venture.

Creation Date	12 January 2016
Expiration Date	02 February 2017
Reference	TOKR20160112002

Details

Description

World environment is being destroyed by indiscriminate waste disposal. Many enterprises interested in environmentally friendly technologies have developed innovative technologies to help the world be a cleaner place. One of them - a technology of recycling PET waste- has been newly developed by this Korean SME.

Usually PET waste generated by beverage bottles, film and fibers can be recycled in 1 of two ways: materials recycling or chemical recycling. Only clean PET waste can be recycled and dirty ones are incinerated.

In the case of chemical recycling, both clean and dirty PET waste can be recycled by this recycling procedure – and this is the technology that the Korean company is offering.

Generally, Chemical recycling methods are classified into four categories which are Glycolysis, Methanolysis, Hydrolysis, and Ammolysis. From each recycling method, respective compound is gained : TPA(terephthalic acid), BHET(bis-2-hydroxy ethyl tetrephthalate), DMT(dimethyl terephthalate).

The offered PET recycling technology consists of 3 processes:

1) pre-treatment process

For stabilized reaction of PET waste, a pre-treatment process is essential.

2) Glycolysis process

This process can produce PET Oligomer for UPR (Unsaturated Polyester Resin) and polyol for PU (Poly Urethane). It is quite a stable and economical process.

3) Purification process

This process mainly increases the degree of purity of produced PET Oligomer and polyol. It saves operation costs, and minimizes the amount of secondary waste. Plus, high value-added products can be created from the produced materials.

The company is interested in transferring their technology to overseas companies and would like to establish a local factory. Therefore, any enterprises who are interested in PET waste recycling are welcomed, in the context of a joint venture or technical cooperation agreement

Advantages and Innovations

- Available to treat all of the PET waste
- Possible to make PET waste to value added products
- Cost saving in operation
- Easy to operate
- Minimizing secondary waste

IPR Status

Patents granted

Keywords

Technology

02007014	Plastics, Polymers
03004008	Plastics and Rubber related to Chemical Technology
10002007	Environmental Engineering / Technology
10003	Waste Management
10003004	Recycling, Recovery

Market

08001006	Processes for working with plastics
08001018	Polymer (plastics) materials
08004002	Chemical and solid material recycling

NACE

C.20.1.6	Manufacture of plastics in primary forms
C.22.2	Manufacture of plastics products

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

- Type of partner sought : companies
- Specific area of activity of the partner : Anyone who is interested in recycling PET
- Task to be performed : contract a technical cooperation, create a joint venture together to localize the end-product

Type of Partnership Considered

Technical cooperation agreement
Joint venture agreement

Technology Offer

A Korean SME is offering an electrolyzed sterilizing water generator

Summary

A Korean SME specializing in the development of eco-friendly materials and facilities is offering an electrolyzed sterilizing water generator. It generates HOCl (hypochlorous acid) which has 80 times stronger sterilizing power and is less pungent compared to chlorine bleach. Also, it is environmentally friendly and less corrosive so that it can be used to clean and disinfect kitchen utensils, food factories, and for sterilizing hands. Technical cooperation or joint venture is available.

Creation Date 12 January 2016
Expiration Date 02 February 2017
Reference TOKR20160112003

Details

Description

Sanitary management is necessary to ensure a clean and safe life. Proper sanitation in the food service, agriculture, and healthcare industries is important and valuable.

It is because food poisoning has increased as well as super bacteria and viruses have appeared in recent years.

For this reason, food conservation became a difficult issue to solve, and the Korea Food & Drug Administration (KFDA) has emphasized and strengthened sanitary management as regards the Hazard Analysis Critical Control Point (HACCP) system.

This Korean SME's main business is developing eco-friendly materials, devices and facilities. And lately they have developed an electrolyzed sterilizing water generator. The generator automatically generates HOCl, which can be used in the field of food service, agriculture, medical welfare, cosmetics, pharmaceuticals and etc.

Comparison of the characteristics between NaOCl(sodium hypochlorite) and HOCl is as follows.

Characteristics of NaOCl

- Sterilizing power is weaker than HOCl. Therefore, high concentration NaOCl is commonly used.
- -The remaining NaOCl(unpleasant smell lingers in the food and kitchen utensils) smells bad after use
- There is limited area to use (things can be corroded or rusted out)

Characteristics of HOCl generated from the electrolyzed sterilizing water generator

- It has a good antimicrobial property using low concentration HOCl

- Non-toxic / environmentally friendly sterilizing water is provided
- No pungent smell is produced
- The water can be conveniently used as tap water (constantly preserving HOCl concentration in water)
- It can be used everywhere (Spraying is also possible)
- It is economical

HOCl produced by the system has been certified by FDA (Food and Drug Administration), KFDA (Korea Food and Drug Administration) and Japanese Ministry of Health and Welfare.

The company would like to find an overseas partner to transfer their technology for broadening their business through a technical cooperation agreement. Also, by transferring the technology, the company would like to create a joint venture to locally develop and manufacture an end-product. Apart from the cooperation types mentioned above, any types of cooperation can be negotiated.

Advantages and Innovations

- Helping block an epidemic (contagious disease)
- Reasonable cost to produce environmentally friendly sanitizer and disinfectants
- Having 80 times stronger sterilizing power compared to the chlorine bleach
- Possible to be used as a food additive certified by FDA (Food and Drug Administration)
- Removing bad odours and less pungent than the chlorine bleach

IPR Status

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

Keywords

Technology

06006009	Ionic Liquids
10002007	Environmental Engineering / Technology
10003004	Recycling, Recovery
10004	Water Management

Market

07004008	Other consumer products
08001023	Other chemicals and materials (not elsewhere classified)
08004003	Water treatment equipment and waste disposal systems

NACE

C.27.5	Manufacture of domestic appliances
G.46.4.3	Wholesale of electrical household appliances

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

- Type of partner sought : companies
- Specific area of activity of the partner: Kitchen appliance manufacturer, Medical device Manufacturer, Agriculture, Fishery, food processing, public hygiene) :
- Task to be performed : technical cooperation for joint further development of applications, joint venture agreement for creating a factory in a local area:

Type of Partnership Considered

Technical cooperation agreement
Joint venture agreement

Technology Offer

Method of recuperative treatment of the zinc ion from residual solutions

Summary

A research team from a Romanian university has invented and patented a method of recuperative treatment of the zinc ions from residual solutions, method that has the advantage of establishing optimum conditions of cleaning solutions containing compounds of zinc waste. The research team is looking for industrial partners interested in license agreements and technical cooperation agreements.

Creation Date 20 December 2015
Expiration Date 19 January 2017
Reference TORO20151105001

Details

Description

A Romanian research team has invented a method for the zinc ion recovery purification of waste solutions. Industrial platforms today, particularly the electrical industry, the engineering industry, the naval industry, the branch of mining extraction, varnishes, paints, pulp and paper, plastics up to organic synthesis, require zinc compounds. Zinc and combinations, especially salts, oxides, carbonates, represent important raw material in the technologies referred to, matters for which is need the advanced recovery, as well as a return to the technological flow, temporary storage or other methods methods of enhancing efficiency of industrial processes. The process, according to the invention, consists in that the zinc ion is extracted in a first step, in the form of oxalate of dihydrated zinc phosphate, in the following optimal reaction conditions: the molar concentration of zinc in the residual solution: molar concentration of zinc in solution of approximately 0.03, the solution pH (potential hydrogen) = 5, oxalic acid in excess of approximately 60% and the reaction temperature of 20°C; after that, through low thermal decomposition of the resulting zinc oxalate at a temperature of 340 ... 370°C, the zinc oxide will be obtained.

The zinc oxide thus obtained is used for manufacturing of pigments, zinc salt preparation or as a catalyst in chemical processes.

The foreign partner that the Romanian research team is looking for can be an industrial partner interested in license agreements and technical cooperation agreements, in order to improve the existing method.

Advantages and Innovations

The technical problem solved by the invention relates to establish optimum purification of waste solutions containing zinc compound, in order to capitalize zinc, while solving ecological problems of the environment. Other advantages that can be mentioned are:

- high purity of the lead oxalate;
- superior decantation, filtration and washing speed of the precipitate as compared to the forms

used within other methods;

- considerable reduced volume for the crystallized precipitate;
- crystalline and anhydrous form of the recovered product;
- chemical stability to atmospheric factors (humidity, heat, light, carbon dioxide).

Compared to other technologies, the presented method removes the following disadvantages of known solutions, which are linked to the amorphous state, the unevenness of compositional extracted forms, the large volume of precipitate even in optimum time settling, low speed filtration and washing of the precipitate instability chemistry to atmospheric agents with passage in soluble pollutant forms.

IPR Status

Patents granted

Keywords

Technology

06006009	Ionic Liquids
06006012	Bioprocesses
10002012	Remediation of Contaminated Sites
10004001	Industrial Water Treatment

Market

04005	Biochemistry / Biophysics
08004002	Chemical and solid material recycling
08004003	Water treatment equipment and waste disposal systems
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**

Client

Certification Standards

ISO 14001:2005
ISO 9001:2008

Partner Sought

Type and Role of Partner Sought

The potential partners could be any SME active in the field of engineering industry, electrical industry, etc.

Concerning the technological cooperation agreement sought, would also like to find a foreign partner for the further technological development, by improving the existing method.

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement

Technical cooperation agreement

Technology Offer

Method of recuperative treatment of the nickel ion from residual solutions

Summary

A research team from a Romanian university has invented a method of recuperative treatment of the nickel ion from residual solutions. The method has as main advantage establishing optimum conditions of cleaning solutions containing compounds of the nickel waste. The research team is looking for industrial partners interested in license agreements and technical cooperation agreements.

Creation Date 20 December 2015
Expiration Date 19 January 2017
Reference TORO20151109001

Details

Description

A Romanian research team has invented a method of recuperative treatment of the nickel ion from residual solutions resulted in the processes related to engineering industry, electrical industry and other related industries that widely use electrochemical technology- nickel. From the residual solutions result technological flow rinse waters with low nickel and depleted electrolyte, with a higher concentration of metal, and these residual solutions need to be treated.

In a first phase, the process consists in the extraction of the ion nickel as nickel oxalate dihydrate in the following optimal reaction conditions: molar concentration of nickel in solution of approximately 0.02, pH (potential hydrogen) of the solution 4.5, oxalic acid in excess of 100%, reaction temperature of 80° C; then, by low thermal decomposition of nickel oxalate obtained at a temperature of 320 ... 360° C, is obtained nickel oxide.

The nickel oxide thus obtained is used as enamelling oxide adherence to metal surfaces, for preparation of salts or as nickel catalyst in various chemical processes.

The foreign partner that the Romanian research team is looking for can be an industrial partner interested in license agreements and technical cooperation agreements, in order to improve the existing method.

Advantages and Innovations

The technical problem solved by the invention relates to establish optimum cleansing waste solutions whose concentration, namely that of chemical and electrochemical nickel in various metallic and non-metallic supports, rose to levels of 6...7 g Ni²⁺/ dm³, in order to capitalize nickel as nickel oxalate, while solving ecological problems of the environment.

Other advantages that can be mentioned are:

- high purity of the lead oxalate;
- superior decantation, filtration and washing speed of the precipitate as compared to the forms used within other methods;
- considerable reduced volume for the crystallized precipitate;

-crystalline and anhydrous form of the recovered product;
 -chemical stability to atmospheric factors (humidity, heat, light, carbon dioxide).
 Compared to other technologies, the presented method removes the following disadvantages of known solutions, which are linked to the amorphous state, the unevenness of compositional extracted forms, the large volume of precipitate even in optimum time settling, low speed filtration and washing of the precipitate instability chemistry to atmospheric agents with passage in soluble pollutant forms.

IPR Status

Patents granted

Keywords

Technology

06006012	Bioprocesses
10002012	Remediation of Contaminated Sites
10004001	Industrial Water Treatment

Market

04005	Biochemistry / Biophysics
08004002	Chemical and solid material recycling
08004003	Water treatment equipment and waste disposal systems
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**

Client

Certification Standards

ISO 14001:2005
 ISO 9001:2008

Partner Sought

Type and Role of Partner Sought

The potential partners could be any SME active in the field of electrical industry, the engineering industry, the naval industry, etc.

Concerning the technological cooperation agreement sought, would also like to find a foreign partner for the further technological development, by improving the existing method.

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement

Technical cooperation agreement

Technology Offer

An high frequency monitoring system for integrated water management

Summary

A Greek Technical University has developed an innovative, integrated data collection and in situ processing system with adaptive/high frequency sampling capabilities for river monitoring. The system is based on a system of high quality sensors connected through a wireless network allowing in situ data processing and modeling of integrated river monitoring. Technical cooperation agreement with European municipalities and regional authorities (where rivers exists in their territories) are sought.

Creation Date 17 December 2015
Expiration Date 15 January 2017
Reference TOGR20151217002

Details

Description

The hydrological and geochemical processes that take place in the Mediterranean region occur at varying special and temporal scales. Temporary river hydrographs are flashy and exhibit characteristic response times ranging from a few minutes to hours during storm and flash events. When high rainfall intensities fall upon crusted soils after long periods of time without precipitation, first flash flood occur which transfer large amounts of sediments and pollutants. The transfer of these materials are short, it takes place under adverse weather conditions and doesn't allow the measurement ,control and mitigation of such phenomena.

The Greek Technical University has developed an innovative, integrated data collection and in situ processing system with adaptive/high frequency sampling capabilities for integrated river monitoring.

The system is based on three sub sections:

- a) The system of sensors which include optical (non intrusive) sensors for quality analysis, chemical and sediment content as well as river flow velocity. The velocity is measured by a camera and the sediment flow by an innovative sediment trap. The sensors are connected through a wireless network, and of video processing subsystem (camera).
- b) In-situ data processing software: The system is able to process data in situ maintaining high levels of energy autonomy and efficiency.
- c) Modeling: Using high accuracy models along with the field measurements, the system is able to predict and visualize the flow of sediments in rivers.

Technical cooperation agreement with European municipalities and regional authorities are sought in order to test and apply the system.

Advantages and Innovations

The innovative aspect of the system is the design of integrated autonomous mechanism (adaptive/high frequency based) which incorporates innovative new generation sensors (optical-non intrusive sensors) for monitoring hydrological parameters along with the capability of in-situ processing of collected data and therefore allowing real time monitoring of rivers. The deployment of optical sensors allows for accurate estimation of river flow velocity and moreover the calculation of river discharge and the concentration of suspended solids that is not possible with the current methods.

IPR Status

Secret Know-how

Keywords

Technology

09001009	Sensor Technology related to measurements
10002008	Measurement and Detection of Pollution
10004008	Water Resources Management
10004010	Hydrology

Market

01006004	Communications services
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NACE

J.63.9.9	Other information service activities n.e.c.
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Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The Greek Technical University is looking for technical cooperation agreements with European municipalities and regional authorities (where rivers exist in their territories) in order to test and apply the system.

Type and Size of Partner Sought

University,R&D Institution

Type of Partnership Considered

Services agreement

Technology Offer

Innovative patented technology for inorganic waste volume reduction

Summary

An Italian SME specialised in innovative solutions for waste valorisation has patented a new system to reduce the volume of inorganic waste which could be applied to industry, commercial activities and private users. This is a low cost production technology which allows to reduce waste volumes over 95%. Partners for license agreements or technical cooperation are sought.

Creation Date 15 January 2016
Expiration Date 22 January 2017
Reference TOIT20160112001

Details

Description

An Italian SME specialised in innovative solutions for waste valorisation has developed and patented a new system to reduce the volume of inorganic waste. The system can be applied to industry, commercial activities and private users and therefore the Italian company is looking for partners interested in adapting the technology to their needs or might be interested in further development through technical cooperation. The company is also interested in license agreements for their patented technology.

The technology patented by the company allows to cut plastic bottles, aluminium cans and glass bottles in pieces of 1 centimeter of diameter and consequently the volume waste can be reduced by over 95%. The system might be adapted to other machines treating waste or it might be used as a separate machine. The system can be used at home as a household appliance, near drink vending machines for minimizing this kind of waste, in the horeca field as a support for kitchens in restaurants or hotels or for ships and caravans because of their low space availability for waste.

The system is the result of years of study and research and it has been actually patented at international level and industrialized, so it is ready for the market.

The system represents an alternative to other expensive systems known today as the compaction one.

Comparing the cost of compactors with the cost of the presented system, the latter is 30% lower. This technology also allows to insert in the same machine different materials, for example glass, plastic, aluminium or paper to obtain waste volume reduction and dramatically decrease the frequency of delivery of waste for collection. Consequently, there are several benefits resulting from the technology use, starting from the needed space reduction for waste storage up to the environmental benefits resulting in a smaller amount of travels that collection means must perform. Furthermore, all recovered waste will be already pre-processed and will suffer less processing to become a new product, so there will be an evident overall lower production of pollutant emissions.

Advantages and Innovations

Normally, industrial cutting technologies are expensive and it is necessary to use very large engines to process waste. Other used technologies are compaction systems which allow anyway limited volume reduction.

The cutting technology proposed by this company combines the possibility of using small engines with a more effective waste reduction (the initial volume can be reduced by more than 95%).

For example, in a bag waste of 120 liters size, by using a compaction system, it is possible to contain about 290 0.5 liters plastic bottles, whereas this technology allows a 120 litres size bag waste to contain about 600 plastic bottles.

Another important feature of this technology is related to the one centimeter pieces resulting from this cutting system. These pieces are raw materials ready to be reused for new products. Without performing further processing it is thus possible to create a short, economic and environmentally sustainable recycling process.

IPR Status

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

Keywords

Technology

03010	Household Goods & Appliances
10002013	Clean Production / Green Technologies
10003004	Recycling, Recovery
11001	Socio-economic models, economic aspects
11008	Creative services

Market

07002005	Other retailing
07004008	Other consumer products
07005001	Fast food restaurants
07005003	Hotels and resorts
08004004	Other pollution and recycling related

NACE

C.24.1.0	Manufacture of basic iron and steel and of ferro-alloys
C.28.9.9	Manufacture of other special-purpose machinery n.e.c.
E.38.1.1	Collection of non-hazardous waste
E.38.3.2	Recovery of sorted materials
E.39.0.0	Remediation activities and other waste management services

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

- Type of partner sought:
Companies

- Specific area of activity of the partner:
Manufacturers and any companies active in home appliances, horeca, vending machines, naval, caravan, recycling, waste valorization

- Task to be performed by the partner sought:
Companies operating in the above mentioned sectors might be interested in adapting the technology to their needs or might be interested in further development through technical cooperation. The company is also interested in license agreements for their patented technology.

Type of Partnership Considered

License agreement
Technical cooperation agreement

Technology Offer

Coconut fiber mats for coastal and seashore protection

Summary

Researchers from a German university institute have developed a method of seashore protection using coconut fiber. The method is an initial protection for seeding or planting of shore protection structures such as dykes or dunes. The team is looking for research partners from industry and academia interested in further projects on the use of this material for coastal and seashore protection.

Creation Date 14 January 2016
Expiration Date 15 January 2017
Reference TODE20160114001

Details

Description

Extreme events such as storm surges result in a number of problems for coast lines - beach erosion being one of them, especially on sandy beaches. Shore protection on the other hand is an expensive procedure and a major factor in the budget of coastal communities. Especially developing countries with long coastlines seek for a economical and ideally locally produced alternative.

In the case of Bali, Indonesia the team found a prototype application of coir fibre geotextiles, serving as initial dune protection. The geotextile was rolled out on the dune head and vetiver seedlings were planted into cutouts. Coir geotextiles will protect the dune in the initial stage, while vetiver grass builds a sturdy root system. In the end, biological degradable geotextiles will decay, avoiding manual deinstallation and serving as nourishment for the plants.

In the case of South East Asia, coir geotextiles are a sustainable, ecosystem-based protection measure, since the material is gained and processed nearby, serving as a local re-investment and thus improving the livelihood regionally.

The institute focuses on sustainable,ecosystem-based protection measure, since the material is gained and processed nearby, serving as a local re-investment and thus improving the livelihood regionally.

The institute focuses on sustainable, ecosystembased "soft" coastal protection measures and were able to expand our knowledge and expertise regarding coir and natural fibre geotextiles. The researchers have performed initial material specifications and set up a physical model in which they found a positive influence on sedimentation (erosion). Currently they are investigating further material specifications, which are required for very sophisticated design approaches, including numerical modelling.

For this, the institute offers access to world renowned expertise in physical modelling and access to its hydraulic testing facilities. Partners are offered cooperation on future joint projects

related to the topic under technical or research cooperation agreements.

Advantages and Innovations

- Protection potential for erosion
- Sustainable
- Strong regional and local link (at present: South East Asia)
- Bio-degradable
- Innovation potential in production and application

IPR Status

Other

Keywords

Technology

02007002	Building materials
07003003	Marine Science
10002004	Climate Change mitigation
10002007	Environmental Engineering / Technology
10002009	Natural Disasters

Market

09003001	Engineering services
09003005	Consulting services
09007002	Manufacture of construction materials, components and systems
09007004	Engineering and consulting services related to construction

NACE

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

Partner Sought

Type and Role of Partner Sought

Research partners from industry and academia or local authorities related to coastal protection etc. interested in existing know-how and in conducting further projects on the use of this material for coastal and seashore protection.

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Technology Offer

Green roof

Summary

Inventor from Poland active in the field of architecture and properties created solution for lack of green space in the cities and cleaner air. The green roof can be used/build in urban districts, on the specific construction of buildings, which is also a part of the invention. The inventor is looking for financial agreement, joint venture agreement or research cooperation agreement.

Creation Date 14 December 2015
Expiration Date 05 February 2017
Reference TOPL20151105001

Details

Description

The inventor from Poland active in the field of tectonics and buildings, invented green roof that can solve the lack of green space and problems with excess of the CO₂ in the air in the urban districts.

The green roof is a construction in the shape of a stairs built with terraced houses with joined corners in such a way that the roof of the house is adjacent terrace of the houses built above.

Characterized in that solution is that the building is built by generally known principles. The inventor introduces a solution in which the roof of one building is a terrace of adjacent house and thus every house has a green roof, which is also a large terrace of the house built on a higher floor. Repetitive roofs-terraces form a large green roof that can protect large cubic building of any grade - kindergartens, schools, shops, small services, offices, catering, hotels, sports halls, medical clinics

This solution eliminates the streets and the inconveniences associated with them.

The inventor is interested in cooperation with companies/institutions that will produce/use or install the green roof/house directly on the buildings, build the green roof house following the inventor idea, develop the product to advanced level with financial agreement, joint venture agreement or research cooperation agreement.

Advantages and Innovations

- Solution with green roofs can be installed on most of the roof tops (any kind of roof, under any angles and surfaces)
- Invention is solving problem with the lack of green space in the cities.
- home gardens can be build close to it's owners
- solution is new on the market, because roof corners can be joined, and create a building as a whole property

IPR Status

Other

Keywords

Technology

10002013 Clean Production / Green Technologies

Market

09007 Construction and Building Products

NACE

F.41 Construction of buildings

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

Type of partner sought: companies, companies/institutions that will produce/use or install the green roof directly on the buildings.

Specific area of activity of the partner: architecture studios, building companies, universities, green institutions.

Task to be performed: installation/usage of the green roof/house, research and development of the invention to advance level

Type and Size of Partner Sought

Inventor

Type of Partnership Considered

Financial agreement

Joint venture agreement

Research cooperation agreement

Technology Offer

Environmental engineering and plasma technology for decontamination of exhaust gases, air pollution control and elimination of odours

Summary

A German SME active in environmental engineering has developed products and processes based on plasma or scrubber technology to reduce air pollution through purification of exhaust gases. Application areas are all industries where exhaust gases play a role (e.g. chemical and semi-conductor industries). The SME is interested in commercial agreements with technical assistance and in technological and research co-operations to improve the products/processes and to identify new application areas.

Creation Date 13 January 2016
Expiration Date 19 January 2017
Reference TODE20160113003

Details

Description

The German SME was founded in the year 2000 as a spin off from a German university. The company offers products for exhaust gas cleaning for industrial applications starting from process engineering and resulting in installations of big industrial plants. Exhaust gas cleaning is very important in almost all industrial sectors such as e.g. the chemical and semi-conductor industries and the SME especially develops and builds plasma systems for air pollution control for these industries. This includes the removal of contaminants from exhaust gas flows or the elimination of odours as a contribution to cut harmful emissions from the environment.

The SME has e.g. developed a patented technology based on steam plasma to remove CFCs (Chlorofluorocarbons) from exhaust gas streams and a nonthermal plasma (NTP) for odour reduction. The designed solutions always depend on the specific problems of their partners and contribute to cut harmful emissions from the environment. The company opens up new paths in environmental engineering using and adapting high-technology and state-of-the-art processes. New technologies developed by the company include:

- Scrubber for ethanol
- Packed column scrubber for chemical absorption
- Steam plasma system for PFC (perfluorocarbon) decomposition
- Steam plasma for pyrolysis application
- Electrofilter for wood furnaces

The company wishes to strengthen its technical co-operations and its research co-operations to further improve products and processes and to identify new application areas. Moreover, the SME is looking for partners interested in identifying and testing suitable solutions from the

company's portfolio and integrating and adapting these solutions to their production processes.

Advantages and Innovations

The company offers very high flexibility - solutions can be tested, identified and optimised for all kinds of industries with very different problems with exhaust gases.

The advantages of the technologies compared to conventional technologies depend very much on the application areas and the specific problems of the partner. However, all solutions offered by the company are adapted to these specific problems and result in an improved reduction of harmful emissions in exhaust gases. This reduction can be reached with their new technologies:

- Plasma scrubbers to decontaminate exhaust gas in the semi-conductor industry
- Thermal plasma sources with steam as the process gas
- Non-thermal plasma sources to reduce odours
- Bio-filters
- Chemical wet scrubbers for harmful exhaust gases
- Adsorption systems for exhaust gas containing solvents

Moreover, the SME offers emission analyses and has mobile test systems to carry out exact measurements of exhaust gas parameters which is the basis for the design of an exhaust gas decontamination system. They also offer their expertise during the concept phase for this decontamination of system.

IPR Status

Secret Know-how

Keywords

Technology

09001002	Analyses / Test Facilities and Methods
10002001	Indoor Air Pollution/Treatment
10002007	Environmental Engineering / Technology
10002008	Measurement and Detection of Pollution

Market

03001001	Semiconductors
08001017	Industrial chemicals
08001023	Other chemicals and materials (not elsewhere classified)
08004001	Air filters and air purification and monitoring equipment
08004004	Other pollution and recycling related

NACE

M.74.9.0	Other professional, scientific and technical activities n.e.c.
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Open for EOI : **Yes**

Client

Certification Standards

other

Partner Sought

Type and Role of Partner Sought

- Type of partner sought;

research institutes, universities, and industry

- Specific area of activity of the partner:

For technical and research co-operations:

environmental studies, process and environmental engineering, exhaust air technology or other

For commercial agreements: all kind of industries were exhaust gases are relevant

- Tasks to be performed by the partner sought:

Research agreement - joint funded research projects of all kinds (research institutes, universities, industry), topics: Plasma \rightarrow technology for environmental applications (disposal), generally: new techniques for exhaust air treatment

Technical co-operation - execution of consistent experiments, academic research, scientific support (research institutes, universities) , identification of new application areas

Commercial agreement with technical assistance – integrate and adapt services and products to new application areas or specific requirements. This also includes tests of the SME whether their solutions are applicable and reasonable for their partners.

Type of Partnership Considered

Commercial agreement with technical assistance

Technical cooperation agreement

Research cooperation agreement

Technology Offer

Technology for production of 3D fibre formed parts without PUR (polyurethane) for acoustic and thermal insulation

Summary

A German SME has developed a new technology for production of 3D fibre formed parts for acoustic and thermal insulation. Nearly every kind of staple fibres can be used (e.g. polyether sulphone, cotton, hemp, flax) and the new technology can replace the common PUR production technology. Applications are e.g. sound insulation parts in cars or insulations in the construction sector. The SME searches commercial agreements with technical assistance or license agreements with partners from industry.

Creation Date 25 January 2016
Expiration Date 26 January 2017
Reference TODE20160122001

Details

Description

Due to their advantages (good shaping properties, good combination of density, rigidity, elasticity) PUR foam based parts are widely used in many industrial sectors. However, there exist significant business opportunities for new materials that approach the advantages of PUR foam as it also has some significant disadvantages: poor recyclability, poor consumer acceptance of PUR due to perceived dangers from precursor monomers or additives.

Therefore a German SME has developed and patented an innovative technology for the production of 3D fibre formed thermal and acoustic parts for isolation and insulation from various materials. The innovation consists of a new system for blowing in fibres and flakes into the production mould without using a semi product like sheets. Thus varying densities and internal structures can be manufactured in one single production step. Moreover, the system allows production from a larger range of different materials than is possible with conventional technologies: The materials could be fibres or a mixture of fibres with foam flakes, thermoplastic fixed with a binder. Nearly each kind of fibres may be taken: Cotton, hemp, flax basalt, glass and PES (polyether sulfone), etc. The technology thus allows the production of isolation and insulation 3D parts for various applications. It has been successfully used in automotive, construction, medical or rehabilitation applications.

Examples for potential applications:

Automotive:

Inner /Engine side dashboard, floor insulation, hood liner, bonnet liner, luggage compartment insulation, fender, underbody panelling, door panel, instrument panel, etc.

Nonautomotive:

Upholstery of furniture, 3D wooden parts, pipe isolation, etc.
3D carbon fibre parts for different usage
Thermal insulation of 3D parts

On the one hand the German SME offers development of 3D fibre formed parts together with companies that produce insulation parts for thermal or acoustical isolation. They also design prototype parts for market evaluation and build moulds and machines for serial production of 3D fibre blown parts. The SME would also transfer the new manufacturing technology to the partner under a commercial agreement with technical assistance.

On the other hand the German SME offers to share the technology with machine manufacturers that are interested in new markets by replacing PUR technology with new fibre technology (e.g. textile machinery manufacturer). This can also be done under a commercial agreement with technical assistance. With respect to the individual application, the company offers customised solutions including machines for fibre preparation with blow-in machines, tools and machines for subsequent processes.

They also offer a transfer of the technology to interested machine manufacturers so that they can produce the machines themselves and possibly sell them under a licence agreement.

Advantages and Innovations

- By building 3D parts directly from fibres with the new technology, no semi products like sheets are necessary. Therefore the costs for one production step are eliminated.
- Also the offcut from the final part could be reduced by using a moulding edge according to the outside shape of the part.
- The densities inside the part are optimized according to the mechanical load and could be combined with endless fibres, placed in defined directions.
- Homogeneous or non-homogeneous density and equal or non-equal thickness are possible.
- Material and weight saving up to 50% is possible.
- Usage of recycling material reduces material costs in addition.
- Better consumer acceptance as natural fibres can be used instead of PUR.

IPR Status

Patents granted

Keywords

Technology

02002005	Forming (rolling, forging, pressing, drawing)
02007005	Composite materials
04007004	Thermal insulation
10002014	Noise Pollution
10003004	Recycling, Recovery

Market

06006001	Thermal insulation
08001009	Speciality/performance materials: producers and fabricators
08003005	Other industrial machinery for textile, paper & other industries

09001005 Motor vehicles, transportation equipment and parts
09007002 Manufacture of construction materials, components and systems

NACE

C.28.9.9 Manufacture of other special-purpose machinery n.e.c.
M.74.9.0 Other professional, scientific and technical activities n.e.c.

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

- Type of partner sought:
Industrial companies

- Specific area of activity of the partner:

1. The partner should be a machine manufacturer of e.g. textile machinery and be in the market already.

or

2. Manufacturer of 3D parts in automotive, furniture, textile or other industries with part production.

If he produces parts of PUR foam, he should be interested in expanding into new areas without foam.

Task to be performed:

1. The (textile) machine manufacturer should be interested in new markets by replacing PUR technology with new fiber technology. He should have already clients in automotive, furniture and textile industry.

2. A production partner should be interested in the production of fibre isolation or insulation parts. Good relations to the automotive industry, especially interior area are preferable

Nevertheless, the German SME is open to exploring new fields of application of the new production system as it is looking to opening new markets.

Type of Partnership Considered

License agreement
Commercial agreement with technical assistance

Technology Offer

UK SME offers its 'risk reduction' software application specifically developed for industrial asset owners / operators in the oil, gas, power and chemical industries

Summary

A UK SME based in north east England with 40 years' experience combining industrial plant model making and development of software technologies for the oil, gas, power and chemical industries, offers its risk reduction web based solution to industrial asset owners and operators to: - demonstrate a risk reduction plan to reduce insurance premiums - have quantifiable data on improvement costs to assist in budget planning License agreement offered. Demonstration available on request.

Creation Date 22 October 2015
Expiration Date 01 February 2017
Reference TOUK20151021001

Details

Description

Founded in 1973, the company started life as industrial plant model makers, and over the last 40 years has grown into a leading hub for the development of innovative technology solutions for the oil, gas, chemical and power industries.

The company's range of software products are used by an extensive network of partner organisations in 23 countries around the world.

The risk reduction application is specifically designed to enable owners and operators of assets such as oil refineries, chemical processing plants, offshore platforms or any other type of industrial asset to quickly and critically determine the level of risk of:

- fire
- explosion
- gas release
- human system failure
- process safety

Cloud based / and offline use

Although the software is a web based application, users are able to work offline, particularly when working in internet restricted zones or sites such as offshore platforms. Captured data is automatically updated to the live web application each time a mobile device is connected to the internet.

Compatibility

The application works across Android, Apple and Windows platforms / mobile devices.

The application includes an observations feature enabling a user to highlight issues directly to senior members of a team, ensuring full transparency and accountability.

Multiple asset owners / operators

Organisations operating multiple assets over separate locations can view these via the web application. It also features a colour coding performance indicator system that instantly allows the user to identify best performing assets, and those which are struggling to meet an organisations improvement level.

Comparing assets to global standards

The application enables owners and operators the ability to anonymously compare assets against other assets in the system, highlighting where they fit on a global standard.

User process

A custom set of questions per industrial asset type are applied, for example:

- Oil refinery
- Chemical plant
- Onshore terminal
- Offshore gas platform
- Oil platform

Each question set is accompanied with the appropriate guidance to assist answering, each answer is attributed a weighting. Upon completion of answering the applicable question set a risk score for the asset is generated, showing where each asset sits among other similar asset types within an organisation.

The application also identifies where money can be best spent on improvement and modification to a plant, process and personnel via effective improvement management.

The UK company recommend asset owners / operators utilise a third party risk consultancy to moderate the information captured in the survey, and to score the risk reduction to be gained by performing the improvements captured during the survey.

A demonstration of the application is available on request.
The full application is offered under a license agreement.

Advantages and Innovations

The application enables

- a clear understanding of the cost of performing site safety improvements
- effective budget management
- ability to prioritise improvements across a multiple asset portfolio
- user-friendly application through the use of hand-held mobile devices.

IPR Status

Trade Marks, Exclusive Rights

Keywords

Technology

10001002 Assessment of Environmental Risk and Impact

Market

02007014 Other industry specific software

06002001 Oil, gas and coal

NACE

M.74.9 Other professional, scientific and technical activities n.e.c.

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

Type of partner sought:

Owners / operators of industrial assets across the oil, gas, power and chemical industries.

Role of the partner sought:

A software license agreement is offered to partners.

A demonstration is available on request.

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

Technology Offer

Smartphone app predicts harmful algal blooms in in-land waters

Summary

A German university has developed an algae estimator, a smartphone app that predicts harmful algal blooms in in-land waters. The university is looking for interested app users to gain further data for data mining in order to comprehensively monitor the water quality of a given region. Interested partners from industry and research are also offered technical cooperation and joint research projects.

Creation Date 09 December 2015
Expiration Date 13 January 2017
Reference TODE20151209001

Details

Description

An institute of the German has developed an android mobile application for a harmful algal blooms (HAB) prediction based on a modified Verhulst equation ($N_t = N_0 (k - N_0) \exp(-r_0 \cdot t)$) from a variety of easy to measure input parameters, such as lake temperature, Secci depth, dissolved oxygen (DO), light (lux) and chlorophyll-fluorescence (Chl a).

As chlorophyll values are not normally easy to access for the user the reserchers used equations for chlorophyll a estimation using partial least square analysis (total Chl a ($\mu\text{g/l}$) = $-6,4775 \cdot 21,6396 \cdot \text{inverse Secci depth (m)} + 0,0006 \cdot \text{square (DO surface (\%))}$; $r^2=0.69$; cyanobacterial Chl a ($\mu\text{g/L}$) = $0.409 - 0.7486 \cdot \text{surface temperature}(\text{°C}) + 17.6979 \cdot \text{inverse Secci depth (m)}$); $r^2=0.76$) from a data set obtained from a shallow lake (Stadtgraben, Germany, 2013).

Data were collected by seasonal weekly sampling of eutrophication parameters (temperature, conductivity, DO, phosphate, ammonia, nitrite, nitrate, Chl a, Secci depth). Temperature differences within water depth layers diminished towards late summer with full circulation stage reached in August. This coincided with full development of algal bloom (defined as cyanobacterial Chl a = $40 \mu\text{g/L}$) and a sharp drop in phosphate and ammonia levels at the bottom.

The model developed from there does show a deviation of max. 16% between estimated and real values in bioreactor experiments and is now under validation in different freshwater lakes.

The institute is open for various forms of research and technical cooperation with academia and industrial partners interested in monitoring of water quality in shallow lakes.

Advantages and Innovations

Harmful algal blooms (HAB) mainly caused by cyanobacteria in freshwater ecosystems present a health risk to the public within eutrophied shallow lakes due to algal toxins released into the water. Thus, algal growth should be monitored during summer seasons, especially in recreational areas. Traditionally, water samples are sent to a lab to analyze for algal blooms, costing time and money. Models predicting HAB from easily measurable parameters on a smartphone could help individuals to take precautionary measures in order to prevent health risks from drinking and bathing in water and raise public awareness.

IPR Status

Secret Know-how

Keywords

Technology

01004001	Applications for Health
01004002	Applications for Tourism
06001018	Virus, Virology/Antibiotics/Bacteriology
10002006	Ecology
10004010	Hydrology

Market

02007007	Applications software
07001007	Other leisure and recreational products and services

NACE

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

Partner Sought

Type and Role of Partner Sought

- Type of partner sought:

1) App users / testers from industry, research, public bodies and private persons for data gaining.

2) Research organisations, public bodies and industrial partners from sectors related to in-land waters protection or operators of recreational areas interested in technical cooperation and

further joint research projects.

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

Technology Offer

Digestion technology for biogas plant

Summary

A German company, active in the machine tools sector, developed a modular designed container for the retrofitting of a biogas plant. The advantage of the technology is the increasing in biogas productivity and the possibility to insert diverse materials into the biogas plant via bio-extrusion. The company seeks industrial partners for further development under a technical cooperation agreement and/or for a commercial agreement with technical assistance.

Creation Date 01 February 2016
Expiration Date 08 February 2017
Reference TODE20160115002

Details

Description

The German company, active in the machine tool sector, has long-term experience in environmental engineering. Under the slogan "Together we can expand your existing biogas plant or design a new one" the company is open for international co-operation. The modular designed container for the retrofitting of a one-megawatt-biogas-plant is a further development of the company. It can also be provided for newly constructed plants. The advantage of this technology is the increase in biogas productivity and the possibility of inserting diverse materials into the biogas plant via bio extrusion. Bio extrude of variable size can be embedded in the isolated container. A conveyor belt with detector does the feeding of the extruder. All metals are inductively discharged over a bypass. It is possible to integrate a tapper unit. In the process the material is conveyed over a drop shaft into the extruder. The filtrated material is ejected on the front site of the container via a stainless steel tube. From here, it falls selectively onto conveyor belt, worm gear or pump which leads the material into the fermenter. A crane is located inside of the container, for the purpose of maintenance work. All plant components are driven by the centralised control system.

Process of bio-extrusion:

The developed process named bio-extrusion occurs through hydrothermal (thermo-mechanical) pulping. The procedure has proven to be very efficient in the substantial and energetic usage of fibre plants. The substrate undergoes a comminution and is reduced into smaller pieces during the process. Pressure and high temperature, as a result of an alternating load and multiple pressure/stress relive cycle inside of the twin-screw extruder, lead to the comminution of the substrate up to the point where the cell structure is homogenised. The biogas yield increases due to the better biochemical-availability and a highly enlarged surface area. This leads to the development of new bacteria stains and to an improved C/N-ratio, because the cellulose and hemicelluloses is opened and released from the embedding lignin coat. The 5- and 6-times sugar is made quicker available. Low molecular and fast transforming substances develop, for example alcohol and other

compounds.

Improved mechanical characteristic:

- Adequate for substances which are difficult to apply in biogas plants, like solid manure, landscaping appliances, maize straw, grass, whole plants, bio-waste
- No floating layers
- Good transportability and passing potential in pipes and valves
- Low stirring energy due to the extruding substrates ability to intermediate ply
- High homogeneity of the substance (extruder is an intensive mixer)
- High dry mass contents insert through solid path

Enhancement of biomechanical decomposition:

- Development of new bacterial strains depending on the "nutrient environment" by the boundary layer mechanic
- Faster reaction rate for the decomposition process of the biomass through an enlarged surface area and optimal reaction and environmental conditions
- Reduction of retention time by an improved degree of digestion volume reduction of digestion chamber
- Improved gas production rate of the organic dry matter content
- Enhanced volumetric loading with improved c/n ratio

The company seeks industrial partners for further development under a technical cooperation agreement and/or for a commercial agreement with technical assistance.

Advantages and Innovations

Agonomic advantages:

- Increment through the usage of hybrid ray instead of maize silage (both extruded)
- Monoculture of maize as bioenergy crop is replaced by a liberal crop rotation
- Logistical efforts: high dry mass content, fewer water transports and thereby less volume to be transported, less humidity inside the plant and accordingly to be sprayed on the fields
- Reduction of silo space and digestion tanks
- Fields are quicker available
- The land value improves due to a liberal crop rotation

IPR Status

Secret Know-how

Keywords

Technology

04005012	Waste to energy - other
07001001	Agriculture Machinery / Technology
10002007	Environmental Engineering / Technology

Market

03007002	Other measuring devices
06003009	Biomass and Biofuels
08002001	Energy management
09005	Agriculture, Forestry, Fishing, Animal Husbandry & Related Products

NACE

C.28.3.0

Manufacture of agricultural and forestry machinery

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

The company is looking for partners from the industry.

Specific area of activity could be agriculture, user of biogas plants and recycler of organic waste.

Role of partner sought is testing the new equipment with technology or improving of an existing biogas plant and/or further development.

Type and Size of Partner Sought

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

Type of Partnership Considered

Commercial agreement with technical assistance

Technical cooperation agreement

Technology Request

Request for biodiesel production technology using high FFA(free fatty acid) especially on pre-treatment and post-treatment process

Summary

A Korean SME is looking for a biodiesel production technology using high FFA(free fatty acid) UCO(used cooking oil) especially pretreatment (transesterification) and post-treatment (separation, washing, refining, etc). The sought partner should have references in manufacturing and installing a corrosion resistance module. They have only completed reaction process using catalyst. They are looking for a partner available for licensing agreement and research cooperation agreement.

Creation Date 12 January 2016
Expiration Date 18 January 2017
Reference TRKR20160112001

Details

Description

A Korean company, a manufacturer of car parts through a factory automation system, has already developed biodiesel production equipment which uses low FFA(free fatty acid) feedstock. It can produce around 3 tons biodiesel per hours.

But In order to convert high FFA into biodiesel, they need technologies for pre-treatment(transesterification) and post-treatment(separation, washing, refining, etc.)

And in all these processes, sulfuric acid and alkali are used as major reaction substances. So proper corrosion-resistant technology is highly needed to ensure its durability. The company is aiming to produce 70 tons in 24 hours a day combining batch and continuous process.

They're looking for a partner who provides an advanced technology mentioned above and does the research and development together to create a completed module with packaging technology.

A company or a research institute which has references in manufacturing and installation of corrosion resistance packaged pretreatment and post-treatment module is sought. Preferred partner countries are Austria and Italy.

*Until August 2016, this TR only opens to Russian partners.

Technical Specification or Expertise Sought

1. Producing biodiesel of 70 tons in 24 hours
2. Corrosion resistance
3. Reliable, economic, and innovative pretreatment and post-treatment technology

IPR Status

Secret Know-how

Keywords

Technology

04005	Renewable Sources of Energy
04005003	Liquid biofuels
04005012	Waste to energy - other
10002007	Environmental Engineering / Technology
10003004	Recycling, Recovery

Market

06003	Alternative Energy
06003009	Biomass and Biofuels
08004	Pollution and Recycling Related

NACE

E.38.3.2	Recovery of sorted materials
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Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Company, Research institute
- Specific area of activity of the partner: Biodiesel production
- Task to be performed: Transfer the partner's technology to the Korean company and collaborate with each other by researching and developing a completed module

*Until August 2016, this TR only opens to Russian partners.

Type of Partnership Considered

License agreement

Research cooperation agreement

Technology Request

Seeking solution for complete replacement of antibiotic in animal semen for artificial insemination

Summary

A French innovative company specialized in animal artificial insemination, aims to replace completely the use of the antibiotic in the semen. The R&D SME is looking for active molecule or mechanical effect solution that would have a cytotoxic property or could inhibit bacteria and their metabolism. The SME is seeking partner bringing know-how, experience or method to develop a suitable solution. Commercial Agreement with Technical Assistance, Technical Cooperation, License Agreement is sought.

Creation Date 19 January 2016
Expiration Date 31 January 2017
Reference TRFR20160119001

Details

Description

According to the European regulations to come on the restriction of the use of antibiotics as part of the problem of antibiotic resistance phenomena, the French company specializing biotechnology for animal reproduction is seeking a partner able to offer alternatives to the use of antibiotics.

The alternative solution (molecule, substance, additive, material...) must be put in contact with semen and offer a way to struggle against the development of bacterial flora that might contaminate it.

The French SME is seeking partner bringing know-how, experience or method to develop a suitable solution for animal artificial insemination. A Commercial Agreement with Technical Assistance, Technical Cooperation, Joint Venture or License Agreement is sought.

Technical Specification or Expertise Sought

The proposed molecule / method / solution must:

- have an antibacterial broad-spectrum (Gram+ / Gram-)
- have a mechanical or chemical effect
- have a bactericidal or inhibitory action
- not be spermicidal to avoid damaging the conservation of semen and its fertilizing capacity
- be easy to implement
- be inexpensive

Current and Potential Domain of Application: Artificial insemination

Keywords

Technology

03004007	Pharmaceutics
06002008	Microbiology
06002011	Bionics
07001009	Veterinary Medicine
10002006	Ecology

Market

04010	Microbiology
04012	Toxicology
05009003	Animal health
09005	Agriculture, Forestry, Fishing, Animal Husbandry & Related Products

NACE

M.75.0.0	Veterinary activities
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Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

- Type of partner sought:
Biotechnologist, Pharmaceutical Industry, Laboratory, University, Research organization, Technical Centre...
- Specific area of activity of the partner:
Microbiology, Infectious diseases, Immunology, Phagotherapy...
- Task to be performed by the partner sought:
To provide product/molecule or technical solution to be tested in the field of artificial insemination

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
- Joint venture agreement

Technology Request

Look for sustainable food packaging made up of 100% recycled materials

Summary

A Brussels-based (Belgian) start-up operating in the catering services looks for food packaging solutions that are entirely made up of recycled materials and that are fully recyclable. The company already uses compostable and environmental friendly packaging but would like a solution avoiding any extraction of new raw materials at the source. The company looks for commercial agreement with technical assistance with producers or suppliers of food sustainable packaging.

Creation Date 18 January 2016
Expiration Date 26 January 2017
Reference TRBE20160118001

Details

Description

Two entrepreneurs have launched in Brussels, Belgium, a new concept of sustainable catering (restaurant service).

The company is looking for food packaging solutions of different formats which must be fully aligned with the philosophy of the start-up. It means a packaging which is made up of 100% recycled material and which can be 100% recycled after use.

The company wants to broaden and green even more the type of food packaging it currently uses.

It aims for commercial agreement with technical assistance with producers or suppliers of food sustainable packaging that will help the company monitor and reduce the environmental impact of its packaging.

**** BACKGROUND

The company is a take-away counter / shop of daily specials made of qualitative products compliant with the slow food concept and the short food supply chain, then in line with bio, local, ethics, greedy approaches to food. Special attention is paid to product's origin, the production condition and processing method.

The objective of this Brussels-based start-up is to provide their clients with a qualitative, varied, tasteful, fast, easy and affordable meal for dinner made of good and fair food. A way to fight against the homogenisation of taste in food industry and its distribution chains, against meals made of ingredients with pesticides, chemical fertilisers and genetically modified organism (GMO).

The whole customer experience has to be aligned with this philosophy and its overall concept behind the sustainable project, including the food packaging chosen for food sales. This latter must be environmental-friendly throughout its entire life cycle.

Technical Specification or Expertise Sought

The start-up already uses compostable and environmental friendly packaging but would like to go one step further by finding packaging solutions made up entirely of recycled materials avoiding any extraction of new raw materials. The packaging should be 100% recyclable.

Moreover, the catering packaging materials must offer safe and stable packaging that guarantees safety and food quality along the entire product self-life and compliant with the following technical requirements:

- Suitable to food contact
- Compliant with oven use (at least for 15 minutes at 180° (Celsius degrees))
- Compliant with microwave use
- Affordable Price : max € 0.5 / piece
- Transparent closure to let the clients see the content (meal)

FORMAT : the company is interested in packaging solutions for the following types of take-away packaging:

- soup bowls
- sauce jars
- take-away meals (size : 18 cm x 12 cm x 5 cm / capacity: 1 L)

In a full life cycle approach, transport distance between the potential supplier and the Brussels-based company will also play an important role in the selection criteria and this includes as well the material on which the solution is based (eg sugar cane is recyclable but the countries of origin are far from Belgium).

Keywords

Technology

08001003	Food Packaging / Handling
10002013	Clean Production / Green Technologies
10002015	Life Cycle Assessment
10003001	Biotreatment / Compost / Bioconversion
10003004	Recycling, Recovery

Market

07003002	Health food
07005001	Fast food restaurants
07005002	Other restaurants
09004006	Packing products and systems

NACE

I.56.1.0	Restaurants and mobile food service activities
I.56.2.1	Event catering activities

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

Type of partner sought: Industry (small or large industry)

Specific area of activity of the partner: producers or suppliers of food sustainable packaging

Task to be performed by the partner sought: provide the Belgian start-up with a turn-key sustainable packaging solution made up of recycled materials and 100% recyclable.

The cooperation envisaged is a commercial agreement with technical assistance so as to help the company monitor the environmental impact of its packaging.

Type and Size of Partner Sought

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

Type of Partnership Considered

Commercial agreement with technical assistance

Technology Request

Development of fiber samples with specific thermal properties for application in 3D-fibre formed parts for acoustic and thermal insulation

Summary

A German SME has developed a new technology for production of 3D-fibre formed parts for acoustic and thermal insulation that can be applied e.g. in the automotive, construction or medical sector. The technology allows production from a large range of different materials and the SME is looking for new fibres for their products/applications that have suitable thermal properties. The SME searches companies for a technical or research co-operation and in a second step for a manufacturing agreement.

Creation Date 25 January 2016
Expiration Date 26 January 2017
Reference TRDE20160120001

Details

Description

A German SME has invented and patented an innovative technology for the production of 3D fibre formed thermal and acoustic parts for isolation and insulation from various materials. The innovation consists of a new system for blowing in fibres and flakes into the production mould. Thus varying densities and internal structures can be manufactured in one single production step. Moreover, the system allows production from a larger range of different materials than is possible with conventional technologies: The materials could be fibres or a mixture of fibres with foam flakes, thermoplastic fixed with a binder. Nearly each kind of fibres may be taken: Cotton, hemp, flax basalt, glass and PES (polyether sulfone), etc. The technology thus allows the production of isolation and insulation 3D parts for various applications. It has been successfully used in automotive, construction, medical or rehabilitation applications.

A big market are PUR (polyurthane) foam based parts, which could be replaced with the new technology, if the right fibres are available.

Fiber based parts are lighter than PUR foam parts. Together with the new technology it is possible to implement different densities for better performance than with PUR.

It exist significant business opportunities for new materials that approach the advantages of PUR foam (good shaping properties, good combination of density, rigidity, elasticity) while at the same time eliminating its disadvantages (poor recyclability, poor consumer acceptance of PUR due to perceived dangers from precursor monomers or additives).

Up to now, however, no fibre on the market has the same resiliency like foam under higher temperature conditions.

Therefore, the SME is looking for a technological or research co-operation with a laboratory or

institute which can develop fibres with thermal properties that come up to the SME's requirements for their applications. Once a suitable fibre has been found the SME will also look for a manufacturing agreement for these fibres.

Technical Specification or Expertise Sought

The requested partner should be experienced in fibre development and provide/develop fibres applicable for products with stable resilience of up to 80C.

For trials some kg of material are needed, for start of serial production later several 1.000t per year.

Keywords

Technology

02007005	Composite materials
02007015	Properties of Materials, Corrosion/Degradation
04007004	Thermal insulation
10002014	Noise Pollution
10003004	Recycling, Recovery

Market

06006001	Thermal insulation
08001009	Speciality/performance materials: producers and fabricators
08003005	Other industrial machinery for textile, paper & other industries
09001005	Motor vehicles, transportation equipment and parts
09007002	Manufacture of construction materials, components and systems

NACE

C.28.9.9	Manufacture of other special-purpose machinery n.e.c.
M.74.9.0	Other professional, scientific and technical activities n.e.c.

Open for EOI : **Yes**

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Laboratory, institute

- Specific area of activity of the partner:
Laboratories with good experience in fiber development.

- Task to be performed:
Development and possibly in a second step production of fibre samples that will be tested and evaluated by the SME.

Type of Partnership Considered

Manufacturing agreement
Technical cooperation agreement
Research cooperation agreement