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ANDALUCÍA

Boletín nº 180 de Oportunidades de Cooperación:

Nanotecnologías, Tecnologías de Producción, Construcción, Materiales, Transporte

(Octubre 2019)

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Agencia Andaluza del Conocimiento
CONSEJERÍA DE ECONOMÍA, CONOCIMIENTO, EMPRESAS Y UNIVERSIDAD

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NANOTECNOLOGÍAS

Research and Development Requests

- [Eurostars2] Looking for partners for developing precursors for ALD (atomic layer deposition) process

TECNOLOGÍAS DE PRODUCCIÓN

Technology Offers

- Removal of odours in recycled plastics
- Dual phase spray technology to develop pharmaceutical products delivering drag for tissue regeneration and to produce biocompatible polymeric 3D products
- Robust self-cleaning coating for easy solar panel maintenance
- Platform based on QR codes for dynamic content management

Technology Requests

- Austrian company is looking for joining techniques to bond foam or natural rubber with wood
- A Polish company is looking for pile pressing equipment for environmentally sensitive areas

CONSTRUCCIÓN

Technology Offers

- Eco-friendly sound damping sandwich panel for electro-mechanical systems

MATERIALES

Technology Offers

- New multifunctional material for catalysis application

Technology Requests

- Circular economy environmental solutions sought for the printing industry

TRANSPORTE

Technology Offers

- Korean company offers solar powered road lighting device

1.
NANOTECNOLOGÍA

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Partnering Opportunity

Profile Status: Published

Research & Development Request

[Eurostars2] Looking for partners for developing precursors for ALD (atomic layer deposition) process

Summary

A government-funded Korean research institute is preparing a project proposal under Eureka, Eurostars2 in 2020. The main goal of the joint research is to create high-performance thin layers using precursors for automobile and wearable device applications. To this end, the institute is looking for partners specialized in developing precursor material for ALD (Atomic layer deposition) process. Preferably a chemical or technological company or R&D institute are sought for research agreements.

Creation Date	09 September 2019
Last Update	23 September 2019
Expiration Date	01 December 2019
Reference	RDKR20190909001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/9c817edd-f86d-4040-ba28-120f5e8aca86

Details

Description

Atomic layer deposition (ALD) is a thin film deposition technology using sequential use of a gas phase chemical process. The ALD process uses two chemicals typically called precursors. These precursors are deposited on the substrate sequentially and reacted to form a thin dense film. Compared to conventional thin film processes it has the advantage to grow, form materials uniformly with high precision on arbitrarily complex and large substrates. As the deposited layer can be finely controlled its perspective is also seen in scaling down microelectronic devices according to Moore's law.
Currently, in areas of semiconductor, various precursors have been studied to form Al2O3, ZrO2, and HfO2 materials.

A leading R&D institute specializing in electronics and IT under the Korean Ministry of Trade has built a good base of ALD application in smart windows and thin-film batteries through the

previous study. Using TEMAV, tris-dimethylamino cyclopentadienyl vanadium have been successful to form vanadium oxide films on glass substrates.

The institute is currently seeking collaboration partners specialized in developing pre-cursor material for ALD(Atomic layer deposition) process for their further research on mobility and wearable device applications to realize better performance than the former application.

The institute aims to join Eureka or Eurostar project with the deadline of call on February 1st, 2020. The project is expected to take three years of development period including commercialization, and the institute is collaborating with ALD equipment manufacture to form a consortium.
Preferably a chemical or technological company or R&D institute are all welcomed to join for R&D collaboration.

*The annual plan of the project is as below:
1. First-year: New development of ALD process for application in automobile/wearable device
2. Second-year: Development of large scale ALD equipment
3. Third-year: Improvement of and fine-tuning of the ALD process for forming thin dense films according to application.

As the Korean institute wishes to submit the project proposal to the Eurostar 2 project on February 1st 2020, they intend to limit the issuance of EOIs for partner search to December 1st 2019.

*The expected outcome of R&D project will be as follows:
1. Commercialization of new type precursor for ALD process to obtain higher GPC(growth per cycle)
2. High performance for automobile application and new type of wearable device

Advantages and Innovations

- Atomic layer deposition process has various advantages compared to conventional deposition methods such as sol-gel coating, APCVD and PVD(Sputter) for forming thin dense films.

- In order to achieve thin dense films control of ALD process, design of ALD equipment and precursor properties are critical. Currently, for smart window applications where vanadium oxide thin films are formed precursors such as VO(acac)2, VTIP(vanaly-tri-isopropoxide), TEMAV, CpV(nMe2)3(tris-dimethylamino cyclopentadienyl vanadium) have been studied.

- This technology aims to achieve low-temperature (<120 ° C) process and high productivity through the development of low-cost & high-GPC precursor and plasma-enhanced spatial-ALD equipment.

Stage of Development

Proposal under development

Keywords

Technology

01002007	Nanotechnologies related to electronics & microelectronics

Market

07004008	Other consumer products
07006	Other Consumer Related (not elsewhere classified)
08001020	Electronic chemicals

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Materials
Nano- and Microtechnologies

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1991

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

South Korea

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Company or research institute

- Required activity of the partner: Development of pre-cursor material for ALD(atomic layer deposition) process

Type and Size of Partner Sought

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

Type of Partnership Considered

Research cooperation agreement

Program - Call

Framework Program

Eureka

Call title and identifier

[Eurostars2] Looking for partners for developing precursors for ALD(atomic layer deposition) process

Coordinator Required

No

Deadline for EOI

01 Dec 2019

Deadline of the Call

01 Feb 2020

Project Duration

144 week(s)

2. PRODUCCIÓN INDUSTRIAL

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Partnering Opportunity

Profile Status: Published

Technology Offer

Removal of odours in recycled plastics

Summary

A Spanish university has developed a procedure for the elimination of odours in recycled plastics by steam stripping. This process, which comprises several stages, can be applied to plastics of different nature, improving the quality of the recycled plastics and increasing their reuse as raw material for products for later use. Companies interested in the commercial exploitation of this technology through licence agreements and/or technical cooperation are sought.

Creation Date	25 September 2019
Last Update	30 September 2019
Expiration Date	30 September 2020
Reference	TOES20190924001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1306402f-5e52-451d-91c6-829901d260df

Details

Description

The organic compounds that cause the bad smell of recycled plastics are found both inside the polymer matrix and on the surface of the plastic. In order to increase the quality of recycled plastics, a Spanish research group has developed a procedure and a system to eliminate these odours by extracting VOCs with water vapour.

This solution is based on the fact that extraction with steam favours the internal diffusion of volatile compounds due to the working temperature, as well as decreases the boiling point of volatile organic compounds immiscible with water, increasing their evaporation from the polymer surface to the gas phase and consequent removal.

The procedure for the elimination of odours in recycled plastics comprises the following stages and equipment (Figure 1):

a) Separation of recycled plastic material (P-VOCs) in an identification separation plant;
(b) Shredding of the plastic and reduction of the size of the plastic particles;

(c) Chemical washing of shredded plastic with surfactant in a stirring tank;
(d) Rinsing of the plastic material to remove dirt and chemicals used in stage (c);
(e) Drying of the rinsed material in a mechanical dryer;
(f) Deodorising the dry plastic material in a deodorising module where:
- the plastic material is introduced at the top of a distillation column;
- the steam from a boiler enters through the lower side of the distillation column;
- the plastic material falls by gravity along the distillation column, the plastic material comes into contact with the steam and the organic components are extracted from the plastic material by steam stripping;
- there is an outlet of organic product, comprising water vapour and VOCs, at the top side of the distillation column; and
- the VOC-free plastic exits at the bottom of the distillation column.

Apart from obtaining a clean product that is a plastic free of VOCs and odours (PL) that is reusable for other uses, it ends up generating an organic product (PO) that is also reusable, where there is water (FO-2) that can be used externally for other uses, and can also be reused to be recirculated to the boiler; and where there are organic (FO-1) remains composed essentially of essential oils that can be commercialized or reused as fuel for producing steam.

This process can be applied to plastics of varied nature (polyethylene, polypropylene, polyester, etc.) from plastic waste of both industrial or domestic origin. Therefore, this procedure could be useful in the plastic recycling sector or manufacturers of plastic containers as an initial stage to ensure the quality of the raw material.

The research group is mainly looking for companies interested in acquiring this technology for its commercial exploitation through license agreement. The company should be responsible for the development of the industrial prototype, the validation of the technology, its installation and its introduction into the market. The university will be ready to provide technical assistance in each step, if required.

However, the research group would be also interested in establishing technical cooperation agreements to further develop the laboratory-scale prototype, to find new applications or to adapt it to the company’s needs. The goal of this type of collaboration would be increasing the technology readiness level for a future commercial exploitation of the patent. The university would offer its support based on their know-how; while, the partner sought would provide its expertise to help improve this invention. The university would offer this partner a preferential option to acquire this technology in exclusivity.

Advantages and Innovations

The main innovative aspect of this invention is the removal of odours in recycled plastic by steam stripping. By means of this process that removes the odours in plastics originating from domestic and industrial sources, it is possible to solve the issues of conventional washing and increase the application of these plastics as raw materials in the polymers industry.

This technology has the following advantages:

- The result is a clean product that is a plastic free of VOCs and odours with an increased quality in comparison with the recycled plastics obtained by conventional recycling.
- By increasing the quality of recycled plastic, new opportunities can appear in the market for this type of plastic (e.g., packaging in the cosmetics and hygiene sector).
- Fully efficient and environment-friendly procedure.
- It boosts the reduction of plastics in landfills.

- It reduces the production costs in the industries of the sector compared to other technologies such as supercritical CO2 extraction.
- The deodorization module is a hermetically closed circuit that allows heat recovery.
- The deodorisation stage can be carried out before or after extrusion.
- The deodorization module can act as an independent module of the recycling process. In this case, pellets recycled by other companies are fed into the system for removing malodours and improving the quality of the material.
- The organic phase obtained consists of essential oils (e.g., limonene or pinene) that can be marketed or reused as fuel for steam generation.

Stage of Development

Under development/lab tested

Comments Regarding Stage of Development

The system has been developed on a laboratory/pilot scale and can treat approximately 0.5 kg/h of plastic, depending on its origin.

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

Spanish patent application

Profile Origin

Other

Keywords

Technology

02004	Plant Design and Maintenance
02005005	Plastic bags
02007014	Plastics, Polymers
10003004	Recycling, Recovery

Market

08003005	Other industrial machinery for textile, paper & other industries
08004002	Chemical and solid material recycling
08004004	Other pollution and recycling related

NACE

M.72.1.9	Other research and experimental development on natural sciences and engineering
P.85.4.2	Tertiary education

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Environment

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1979

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Industry.
- Specific area of activity of the partner: Recycling of plastic waste; Manufacturers of plastic containers; Producers of virgin raw material.
- Task to be performed:
* In the license agreement: to buy a license for the technology, to further develop it to the industrial scale and to introduce it into the market.
* In the technical cooperation agreement: to provide their expertise in order to collaborate with the scientists on further development and improvements of the technology. The company should identify technical requirements and/or market and client's needs in order to carry out further technical development so that the market readiness will be increased and the technology could be commercially exploited.

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

Attachments

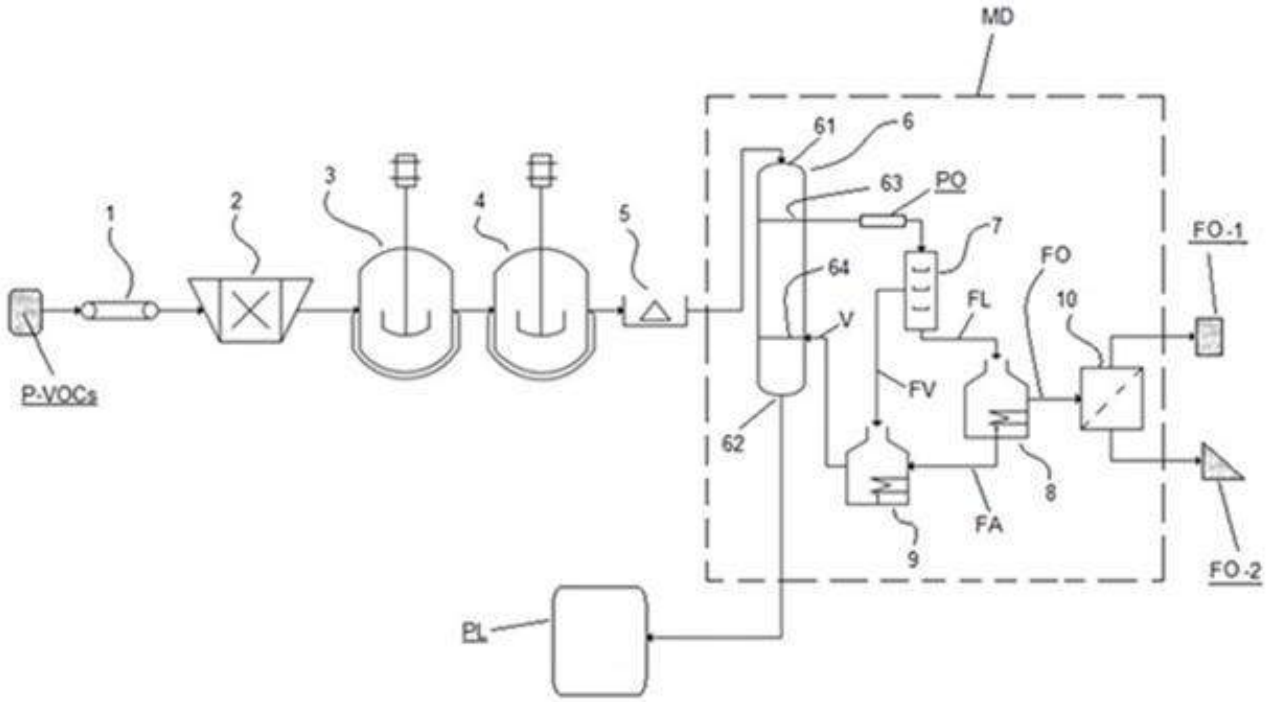

Figure 1. *Schematic diagram of the different elements of the procedure for carrying out odour removal in recycled plastic materials: 1. Separation; 2. Shredder; 3. Chemical washing; 4. Rinsing; 5. Drying; 6. Distillation column; 61. Upper part of column; 62. Lower part of column; 63. Upper side of column; 64. Isothermal tank; 7. Droplet separator; 8. Isothermal tank; Steam boiler; 10. Separator; P-VOCs: Plastic with VOCs; MD: Deodorizing module; V: Steam; PO: Organic product mixture; FL: Liquid fraction; FV: Vapour fraction; FO: Organic phase current; FA: Aqueous phase current; PL: Free plastic; FO-1: Organic compounds; and, FO-2: Water.*

Figure 1

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Partnering Opportunity

Profile Status: Published

Technology Offer

Dual phase spray technology to develop pharmaceutical products delivering drag for tissue regeneration and to produce biocompatible polymeric 3D products

Summary

A mechatronic Italian SME implemented and patented a technology based on phase inversion and developed a "spray machine" tested to produce biocompatible patches for tissues regeneration and heart valves having polymeric base. Company search pharmaceutical industries interested to develop new medical products using spray technology, research centres to study biomaterials and health structures for clinical trials. Technical and research cooperation agreements are proposed.

Creation Date	24 September 2019
Last Update	02 October 2019
Expiration Date	02 October 2020
Reference	TOIT20190920001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/d3f8c332-5726-4ba7-834a-0effd736b459

Details

Description

The applicant is an Engineering Italian company founded in 1991 as University spin off. Company is skilled to design and develop mechatronics products and robotic systems for industrial customers and as partner on R&D EU and National projects. The company is part of a US medium-sized Group producing and selling industrial and medical equipments on the global markets.

Innovative solution
The company, in collaboration with an Italian Research Centre skilled in biomaterials, has developed and patented a technology, based on phase inversion, and a "spray machine" advanced prototype that allows to manufacture biocompatible pharmaceutical products for regeneration of tissues (eg patches for the treatment of ulcerative sores). A subsequent version

of the spray machine prototype (also patented) has been set up with a robotic arm, which allows to manufacture three-dimensional medical prostheses (for example heart valves) with a polymeric base with modular physical and mechanical properties depending on the end use. The spray machine have two spray-guns that spray the polymeric solution and a non-solvent material focusing the jets in a precise point of the spindle (if a bi-dimensional patch is to be made) or on a mould model (if a shape is to be made three-dimensional such as a heart valve).

Markets target: medical applications for therapy of the ulcerative diabetic sores and application for dentistry.

Collaboration offered
Applicant company can study, implement and industrialize the customized manufacturing solutions for new medical products for tissue regeneration defined by the health and industrial partners
The company can also involve in the project the Italian biomaterial R&D Centre Research Centre that has already collaborated to the spray technology develop and testing. This R&D Centre is able to define, implement and test the new biomaterial requirements.
The company offers research cooperation agreements to University Laboratories and Research Centre to study and develop the biomaterials.
Medium and big Pharmaceutical and dentistry devices companies are sought to collaborate with technical agreements in the new products prototyping, developing, production and commercialization.
The company seeks also for Hospitals Health and Dentistry structures to implement the clinical trials with research cooperation agreements.

Advantages and Innovations

The spray machine uses the phase inversion technology to create three-dimensional polymer-based constructs, with physical and mechanical properties that can be modulated according to the end use. This system allows to spray at the same time a polymeric solution and a non-solvent focusing the jets in a precise point. Phase inversion technique allows to generate complex three-dimensional structures starting from polymeric solutions thermodynamically unstable and sprayed through two spray-guns.
The three-dimensional structure generated, similar to a "non-woven fabric", can assume different porosities, properties and morphological characteristics depending on the regulation of the manufacturing parameters.
The nanostructured patch developed by spray technology has been tested as device delivering drug of the growth factors contained in the platelet concentrate. Therapeutic efficacy has been verified “in vivo” on chronic sores of diabetic mouses.

Stage of Development

Field tested/evaluated

Comments Regarding Stage of Development

The spray technology and machine are in use at a Biomaterial Centre for laboratory tests

IPR Status

Patents granted

Profile Origin

Private (in-house) research

Keywords

Technology

02002016	Microengineering and nanoengineering
03004007	Pharmaceutics
06001002	Clinical Research, Trials
06001024	Medical Biomaterials
06006006	Biological Nanomaterials

Market

05003005	Drug delivery and other equipment
05005017	Dentistry / Odontology, Stomatology
05007002	Pharmaceuticals/fine chemicals

NACE

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

Network Contact

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

1991

Already Engaged in Trans-National Cooperation

No.

Experience Comments

Company staff is composed by around 25 people, including mechanical engineers, electronic engineers, software engineers, skilled technicians, marketing specialists and sales representatives. Highly qualified personnel is the company strength that allow to offer very competitive industrial services relating the contract design and prototype development on the international markets. The company participated since the 90s in more national and European R&D projects and worked with leading companies in the biomedical sector, automotive, gas & oil, rail transport.

Languages Spoken

English

Client Country

Italy

Partner Sought

Type and Role of Partner Sought

Medium and big Pharmaceutical and dentistry devices companies to collaborate in new products prototype develop and produce and commercialize the news products resulting from the project.
The type of partnership considered is technical agreement.

University Laboratories and Research Centre to study and develop the biomaterials in collaboration also with the Italian Centre yet involved by applicant company. The partnership considered is research cooperation agreement.

Hospitals, Health and Dentistry structures to implement the clinical trials. Suggested partnership is research cooperation agreement.

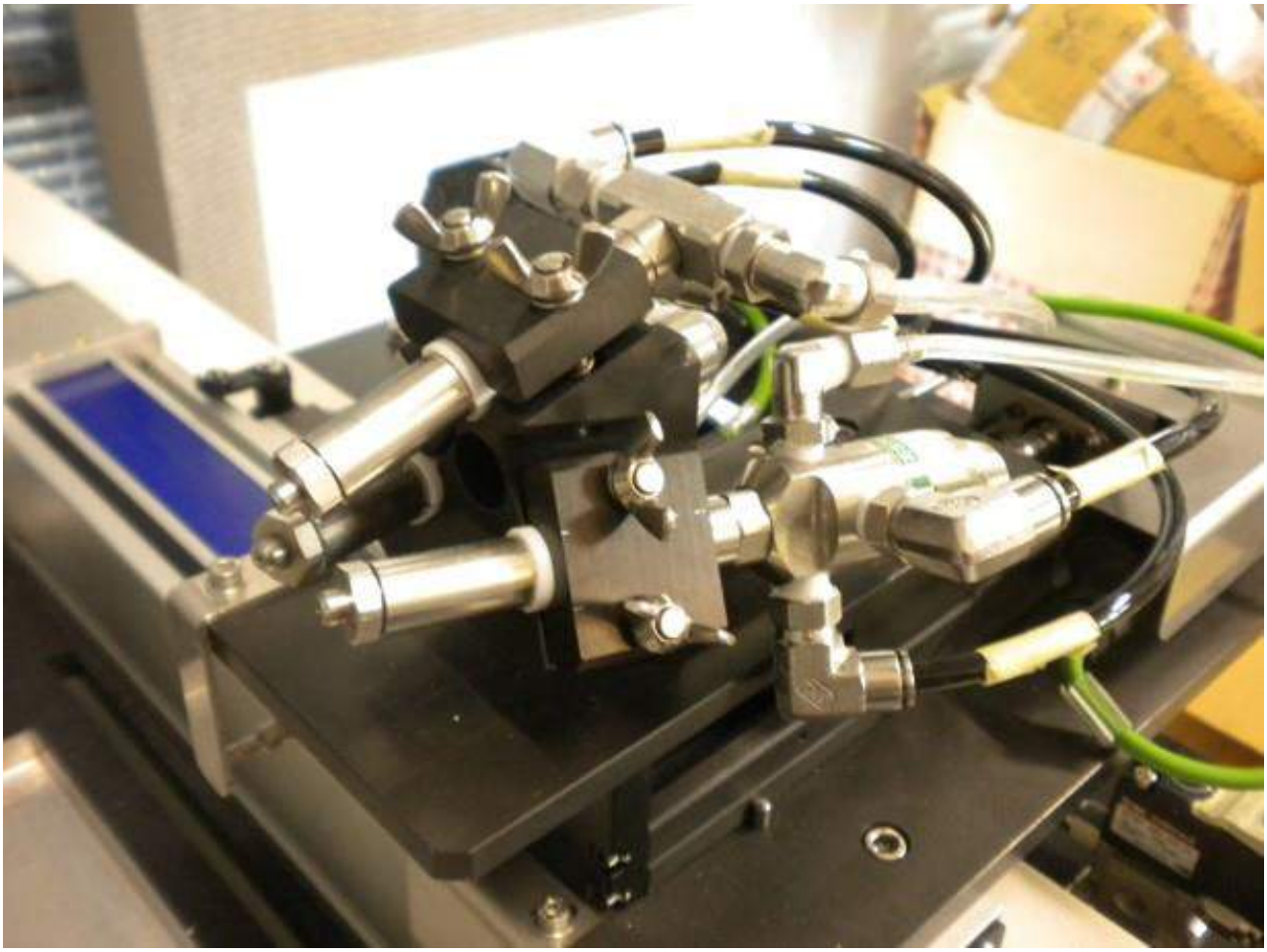
Type and Size of Partner Sought

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

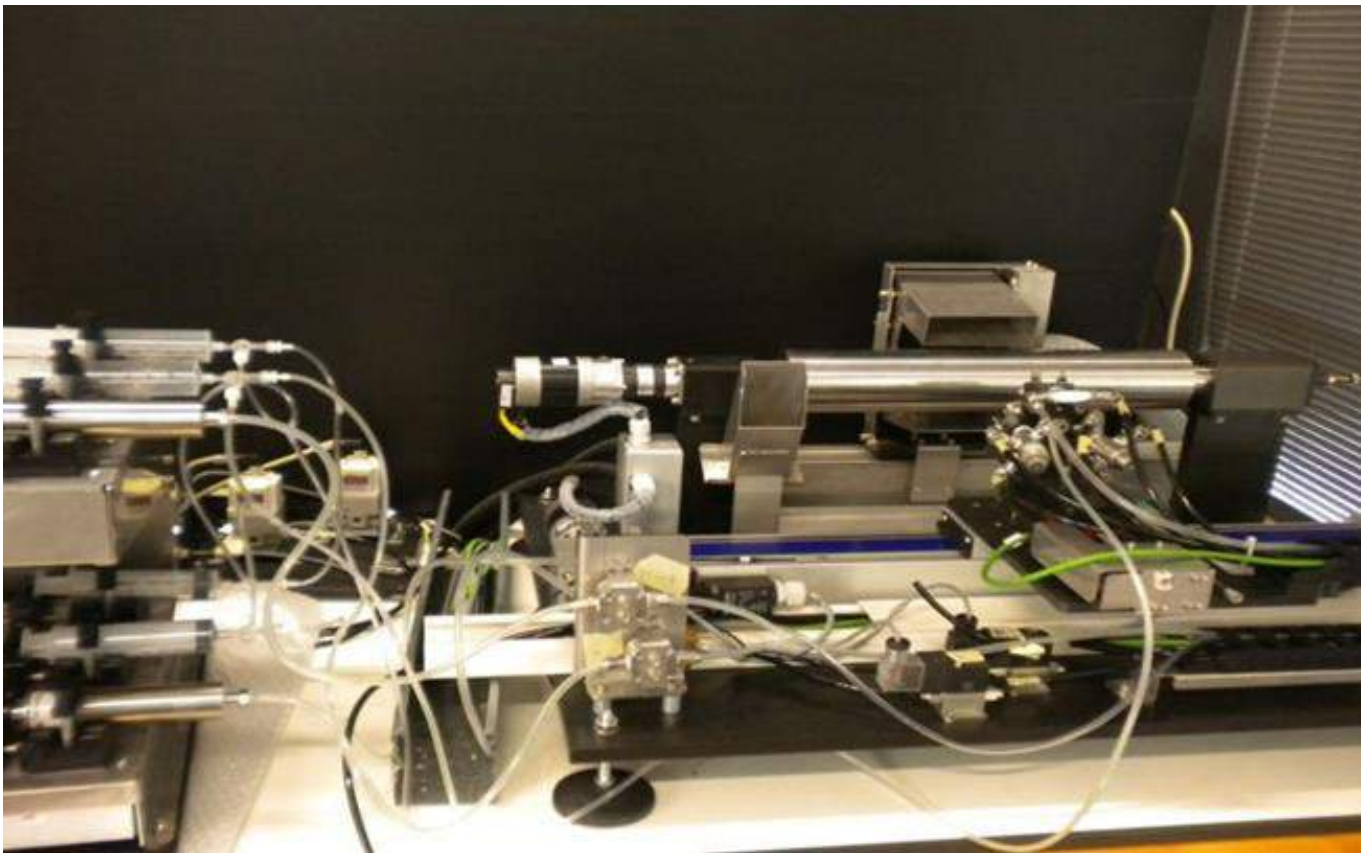
Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

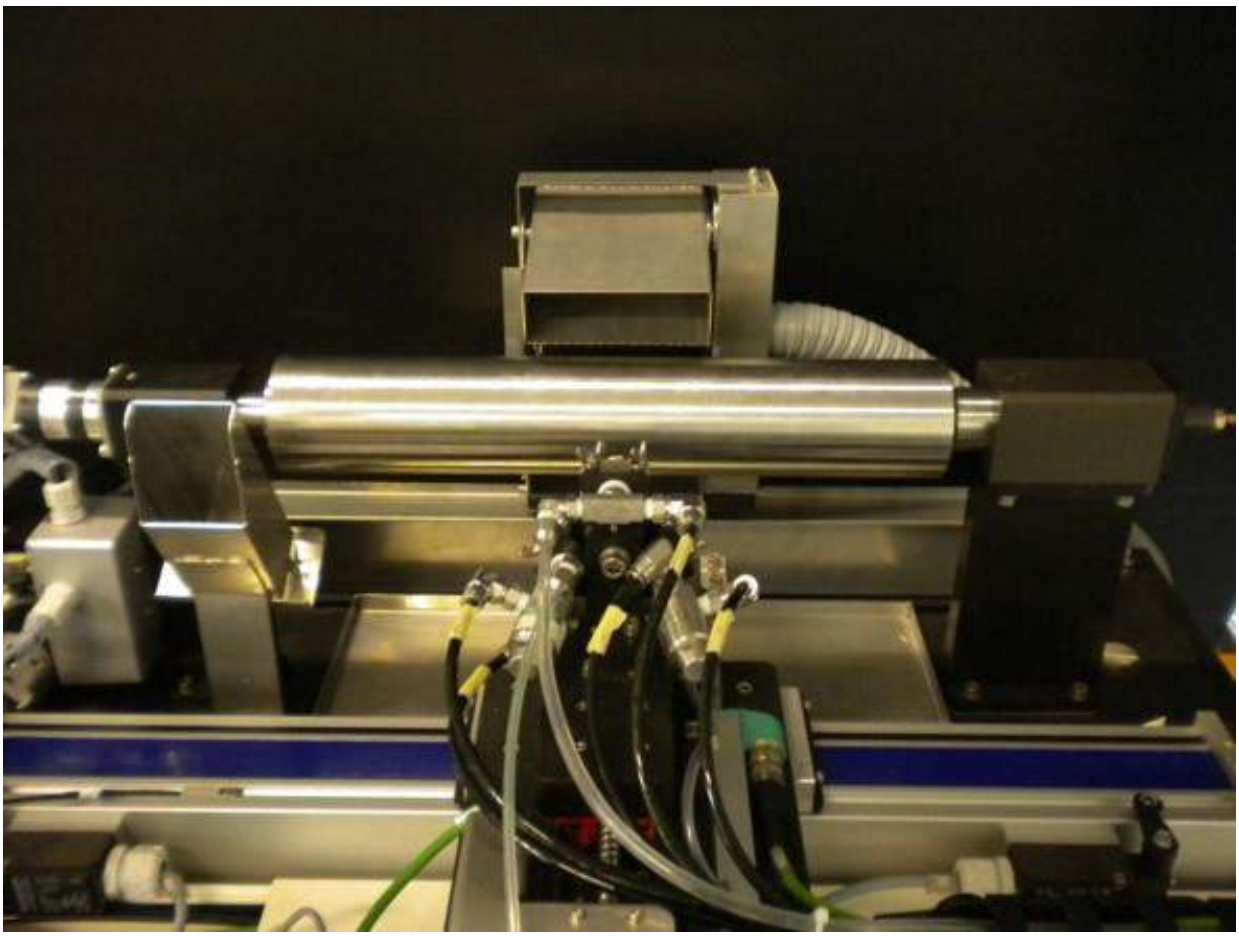
Attachments



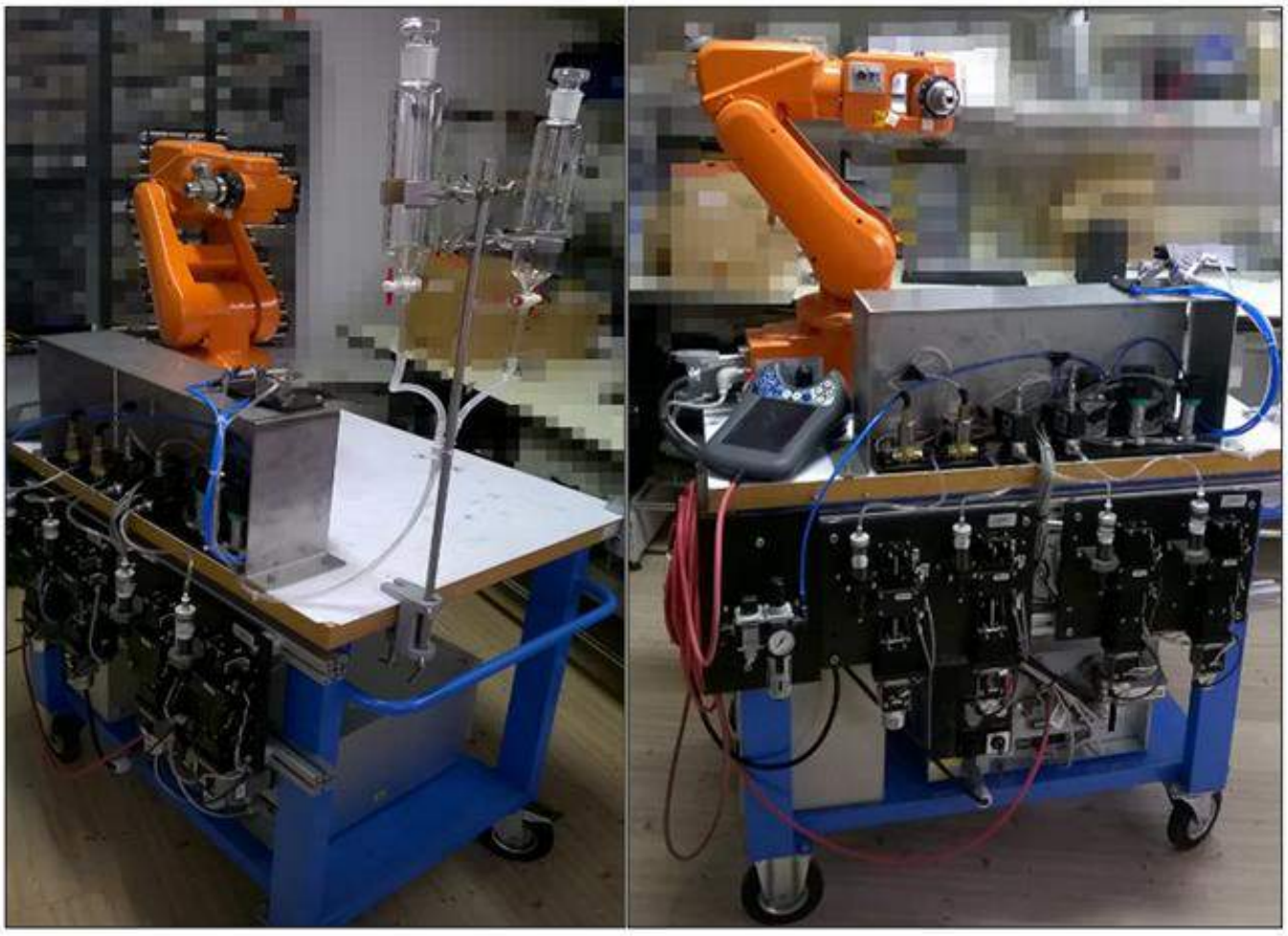
Spray machine: detail of the two spray guns



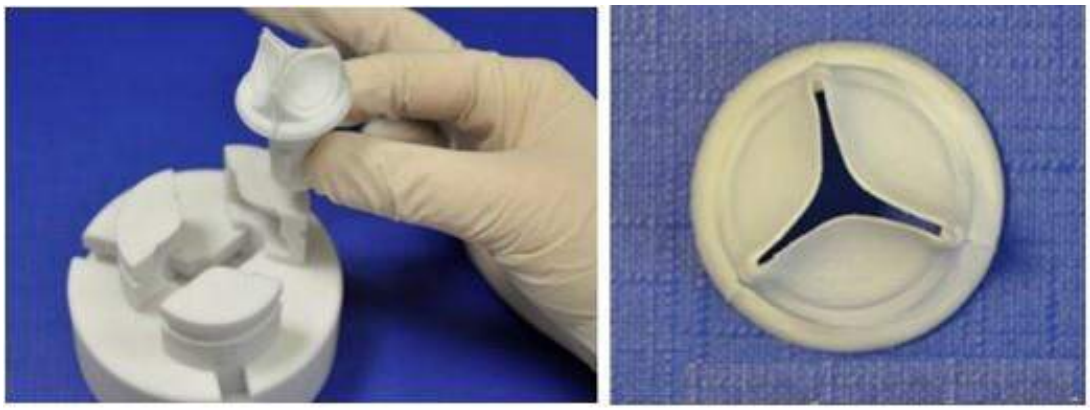
Spray machine prototype for bi-dimensional products (Patch)



Spray machine: detail of the cylindrical mandrel on which the biomaterial is sprayed for the formati



Two images of the spray machine equipped with robot and mould to produce three-dimensional products



Moulding system tool and polymeric valve

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Partnering Opportunity

Profile Status: Published

Technology Offer

Robust self-cleaning coating for easy solar panel maintenance

Summary

A Singapore institute has developed a coating technology that lasts well beyond the lifetime of solution-based coatings. This technology offers high transmission in addition to superior bonding to any surface that requires transparent, anti-soiling coating or fouling – such as solar panels, building façades, windows, vehicle windscreens and aquariums. The institute is interested in potential licensing partnerships with MNEs or SMEs of any size.

Creation Date	18 September 2019
Last Update	30 September 2019
Expiration Date	30 September 2020
Reference	TOSG20190918002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/80f8ba2c-6a8f-4e9e-b21c-4d492111e3e5

Details

Description

Current self-cleaning coating products in the market tend to be less durable or allow a reduced amount of the light to be transmitted. For solar panels, coatings are generally applied in two ways. Solution-based coatings are less durable and must be regularly re-applied, as they do not bond to a surface long enough to last the lifetime of a solar panel. Coatings applied using vapour phase processes could significantly reduce the light transmission of the substrate, adversely affecting the power output of a solar panel.

While solar panels are very durable and can last some 25 years, maintenance is required to maintain its specified output throughout the panel's lifetime to alleviate soiling on the panels. This maintenance can become costly especially if the panels are deployed in remote regions or if soiling is particularly heavy. For example, Middle Eastern locations may face sandstorms and arid weather, while solar panels in urban places like Singapore may encounter bird droppings and hydrocarbon pollution. Cleaning panels may be a difficult task in such countries, where

labour cost is high and water is a precious resource.

A self-cleaning coating is an ideal solution to ease the maintenance of the solar panels by breaking down organic materials that are usually sticky, and creating a water-loving surface to allow rain or other water sources to easily wash them off naturally, without scrubbing or scraping, keeping the coated surface clean.

The Singapore institute has developed a novel Titanium dioxide (TiO2) additive with enforced self-cleaning efficiency. The multi-layer coating with TiO2 is then applied using the physical vapour deposition (PVD) of thin film sputtering onto any surface that requires transparent, anti-soiling coating or fouling. This includes solar panels, building façades, windows, vehicle windscreens and aquariums. This coating technology lasts well beyond the lifetime of solution-based coatings, while offering high transmission and superior bonding to the surface.

The Singapore institute is keen to partner MNEs or SMEs of any size by licensing this technology.

Advantages and Innovations

The tunable multi-layers of the coating allow for increased light transmission, self-cleaning effect and colour effects and offers the following specifications:
• Visible and near-infrared (NIR) light transmission (400-1000 nm): ~90%
• Durability: Minimal change in light transmission after 150 cycles of oscillating sand abrasion
• Water contact angle: 0-10°
• Higher power output over usage period as compared to other coatings available in the market

This coating offers the following advantages:
• Actively responsive to not only UV light, but also visible light
• Easily coated on the surfaces like solar panels and existing or new buildings by painting or spraying
• Removes dirty particulate pollutants
• Lower maintenance and material costs as the frequency of maintenance is reduced
• Lower water consumption for cleaning stains
• Higher power output over usage period as compared to other coatings available in the market

Stage of Development

Field tested/evaluated

IPR Status

Secret Know-how

Comment Regarding IPR status

-

Profile Origin

Private (in-house) research

Keywords

Technology

02007002	Building materials
03001001	Cleaning Technology
03004002	Inorganic Substances
04005005	Solar/Thermal energy
05001003	Inorganic Chemistry

Market

06003001	Solar/thermal energy
06007001	Other energy production
08001007	Coatings and adhesives manufactures

NACE

C.20.3.0	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
F.41.2.0	Construction of residential and non-residential buildings
M.74.9.0	Other professional, scientific and technical activities n.e.c.

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Environment
Intelligent Energy
Materials
Nano- and Microtechnologies
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

Singapore

Partner Sought

Type and Role of Partner Sought

The Singapore institute of higher learning seeks to partner industry players (SMEs of all sizes or MNEs) through licensing partnership agreements where the partner could develop the technology further and introduce it as a product or service to its customer segments.

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

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Offer

Platform based on QR codes for dynamic content management.

Summary

A Spanish research centre, involved in industrial innovation processes, has developed a platform, based on dynamic QR codes, that allows companies to manage and connect the dynamic production processes, adding value to offline products. Dynamic QR codes are processed automatically and transparently; they can be edited from anywhere, without any physical involvement; codes allow to standardize processes and integrate product traceability. Technical and research cooperation agreements are sought.

Creation Date	28 August 2019
Last Update	20 September 2019
Expiration Date	20 September 2020
Reference	TOES20190828001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/a856b6c9-fbba-4632-8f05-6115b809c77f

Details

Description

A Spanish technology centre works with the objective of bringing solutions to companies within the industry 4.0 techniques: internet of things (IoT), big data, artificial intelligence, data processing…

Companies need simple and cheap systems that allow them to identify and connect the starting materials and the products they develop individually with their production process and also with their customers and suppliers. It is also is very important for them to find a tool to standardize their production process.

The existing technological solutions and approaches for this problem are based on the use of static and non-dynamic QR codes. For this reason the center has developed a platform, based on dynamic QR codes, which give an answer to the individual traceability, standardization needs

for all types of companies. Companies can manage, with the platform, all the content: materials, machinery, tools, personnel, etc. adding value to their products. The information is associated through dynamic QR codes which facilitates the adoption of its widespread use in many of its management and industrial processes.

QR codes enable the intelligent management associating products and processes. The platform gives special attention to traceability using technologies such as blockchain.

The platform gives access to tools and mechanisms for the management and treatment of QR codes, such as:
• Use of templates: creation and management of contents that are linked to QR codes.
• Creation of groups and ranges of QR codes
• Use control: who scans the QR code? (geolocation) where? how often? etc.
• Roles: matching the type of content with the type of user.
• Usage statistics
• Modules: the platform offers functionalities such as; documentation, user manuals, specific content, multimedia, news, incidents or management of spare parts; and it is also possible to include custom modules.
• Traceability of its products to see the information captured throughout the life of the QR code.
• Manage the tasks of the operator to use the QR code as an information gateway between users.
• Integration with ERP(enterprise resource planning) platforms, capturing and sending data from your ERP to the QR
• Custom design: modules with special features.

The research centre expects industrial partners who are able to integrate the platform into their management. The centre can support in realizing the integration with other systems in the company.
Cooperation with partners would be in the frame of a technical agreement.
Also the centre would like to collaborate on joint research and development projects, under research cooperation agreement, in programs such as Horizon 2020.

Advantages and Innovations

This technology:
- saves time and resources when taking records and performing audits
- offers more information about products that can be shared with customers and consumers
- guarantees the authenticity of the product
- is monetizable thanks to business micro marketing campaigns based on the traceability process through segmented promotions aimed at consumers
- tracks production batches in real time, from their origin to their destination
- uses interface design focused on the user's experience. This contributes to simplify processes and optimize traceability tasks
- companies don´t need to further spend money on modifying packaging, neither will they need to add new barcodes to use this technology. This platform works on the original branding of the product.
- has capability of integration with IoT (Internet of things) devices and other traceability software through the API (application program interface) of this technology.
- it is not necessary to regenerate QR codes or updating their content, the platform adapts old codes, which save time and money.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Keywords

Technology

01003003	Artificial Intelligence (AI)
01003025	Internet of Things
01004004	ASP Application Service Providing
02004	Plant Design and Maintenance
08002004	Traceability of food

Market

08003007	Other industrial equipment and machinery
08006001	Process control and logistics
09004008	Other manufacturing (not elsewhere classified)
09005	Agriculture, Forestry, Fishing, Animal Husbandry & Related Products

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

ICT Industry and Services

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The Research institution is looking for:

Potential users who would be interested in jointly developing use cases for their industry via a technology cooperation agreement.

The centre is also interested in research cooperation agreement with industry and other research institutes. The centre is also open to collaborate in the frame of European Projects such as Horizon 2020 projects.

Type and Size of Partner Sought

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

Type of Partnership Considered

Technical cooperation agreement
Research cooperation agreement

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Request

Austrian company is looking for joining techniques to bond foam or natural rubber with wood.

Summary

An Austrian company is developing a yoga mat with wood applications. The mat consists of a basic material on which the wood is applied. The basic material of the mat is foam or natural rubber. The company is looking for a solution to fuse or bond the two materials. Partners from industry or academia are sought under commercial agreement with technical assistance or technical cooperation.

Creation Date	30 August 2019
Last Update	26 September 2019
Expiration Date	21 September 2020
Reference	TRAT20190830001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/2c0d3c0c-41a3-4b1b-a967-48f901a0e267

Details

Description

The Austrian company is active in the field of wood processing and design. The small enterprise located in Tirol develops a yoga mat with wood application. The special odours of Swiss stone pine wood are intended to enhance the health effect of yoga and sport activities.

In order to connect both materials, wood with the underlay mats, they are looking for partners that can offer a proper solution. The company is looking for an innovative process that guarantees a durable bond between the foam/rubber and wood materials. Solutions which combine the two materials with a special glue are also welcome.

The mats are used for yoga and sports, therefore the glue or fusion process should be contaminant free, elastic, sustainable, waterproof, heat resistant and odorless.

They are looking for partners from industry or academia that could offer a solution under commercial agreement with technical assistance or technical cooperation.

Technical Specification or Expertise Sought

The company is looking for a solution that guarantees a durable bond between the basic material (foam/rubber) and the wood applications. The solution could be an innovative fusion process or a special glue that combines the yoga mat with the wood.

The glue or fusion process must not cause any harmful substances on the mat.Furthermore, the glue or fusion process should be contaminant free, elastic, sustainable, waterproof, heat resistant and odorless.

Keywords

Technology

02002007	Joining techniques (riveting, screw driving, gluing)
02007001	Adhesives

Market

07001004	Sporting goods, hobby equipment and athletics clothes

Network Contact

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Materials

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
German

Client Country

Austria

Partner Sought

Type and Role of Partner Sought

The Austrian company is looking for partners from industry or academia. The partner should offer a solution to fuse or bond the basic material (foam/natural rubber) with wood applications.

The Austrian company is looking for a commercial agreement with technical assistance in order finalise the product with the desired properties. They are also open for a technical cooperation agreement with partners to jointly co-develop a solution.

Type and Size of Partner Sought

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

Type of Partnership Considered

Commercial agreement with technical assistance
Technical cooperation agreement

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Request

A Polish company is looking for pile pressing equipment for environmentally sensitive areas.

Summary

A Polish construction and engineering company that wish to provide services into areas previously inaccessible due to environmental and noise/pollution issues seeks sheet pile pressing equipment that is especially designated for environmentally sensitive and/or in close proximity to other properties. The company want to cooperate via commercial agreement with technical assistance.

Creation Date	04 July 2019
Last Update	26 September 2019
Expiration Date	26 September 2020
Reference	TRPL20190704001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0af1c6b9-34b5-4e06-a4c7-5c7a42974daa

Details

Description

The company which established in 1998, is located in Warsaw's metropolitan area, capital of Poland.
The company's offers new technologies and machines that allow to perform work faster, better and cheaper, directing its activities to the industry related to specialized works in the field of geo technique, hydro engineering and deep foundations.

The company offers the following: sale of brand new machines and devices, sale of used equipment, rental of a wide range of equipment, service of specialized devices, expert advice on equipment and technology.

Due to the high demand from existing client the company currently seek technology that allows to design a sheet pile pressing equipment especially designed for pilling sheet steel piles into environmentally sensitive areas, close to the other buildings. Therefore the technology used

must allow for a quiet and vibration free working of a pile pressing equipment.
The company want to cooperate with partners through commercial agreement with technical assistance.

Technical Specification or Expertise Sought

Technology technical specification:

Technology technical specification:
Maximum pressing force 1500 kN
Maximum pulling force 1600 kN
The stroke of servomotors 800mm
Pressing speed 1.8 - 23.0 m / min
Extrusion speed 1.9 - 18.0 m / min
Total mass less than 10 tons (without clamp)

Keywords

Technology

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

Market

08003001	Machine tools, other metal working equipment (excl. numeric control)
08003003	Mining machinery
08003006	Power transmission equipment (including generators & motors)
08003007	Other industrial equipment and machinery

Network Contact

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Polish

Client Country

Poland

Partner Sought

Type and Role of Partner Sought

A Polish company wish to cooperate with partner with well documented experience in design and production of piling equipment. The ideal for would be a commercial agreement to purchase equipment with technology assistance to face potencies problems, changes, and all the issues that could possible came up during equipment's exploitation.

Type of Partnership Considered

Commercial agreement with technical assistance

3.

TECNOLOGÍAS DE LA CONSTRUCCIÓN

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Offer

Eco-friendly sound damping sandwich panel for electro-mechanical systems

Summary

A Singapore institute has developed a novel eco-friendly sandwich panel for cost-effective sound damping in electro-mechanical systems. The composite sandwich panel replaces traditional synthetic materials such as polyurethane foams with a mechanically stronger, injection mouldable and 3D printable structure with tunable sound, vibration, mechanical and heat absorption properties. The institute is interested in potential licensing opportunities with MNEs/SMEs of all sizes.

Creation Date	18 September 2019
Last Update	03 October 2019
Expiration Date	03 October 2020
Reference	TOSG20190918001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/6056149a-298f-44ad-ad31-def4a969fb6e

Details

Description

The rapid construction and development of the global built environment has led to serious noise pollution, with adverse effects on personal health, the environment, productivity and the reliability of electronic systems and other mechanical structures. As sustainable construction and development becomes an increasingly significant goal in the evaluation and promotion of the electro-mechanical systems used in buildings, manufacturing and work environments, it has become imperative to find cost-effective and environmentally friendly solutions that can help to reduce the noise pollution.

The eco-friendly sound damping sandwich panel developed by the Singapore institute is superior to traditional synthetic materials such as polyurethane foams which are toxic, feature poor mechanical strength, unable to absorb sound and control vibration at low frequencies, difficult to recycle and usually, end up in landfills. The novel composite sandwich panel is a mechanically stronger, injection mouldable and 3D printable stand-alone mechanical structure

that is made out of recyclable materials and further customisable to be effective for a wide range of sound damping applications.

The sandwich panel for sound damping in electro-mechanical systems has been developed with the following characteristics:

- Multi-layered design to absorb sound and vibration at both high and low frequencies
- Injection mouldable and 3D printable layered structures
- Mechanically stand-alone structures
- Polymer resins and fillers can be used from natural materials
- Tunable sound, vibration, mechanical and heat absorption properties

The technology will find applications in commercial manufacturing industries that require sustainable, customisable and cost-effective acoustic damping and vibration control. The technology is suitable for applications such as:

- Electronic systems and/or components
- Heavy machinery
- Manufacturing factories
- Buildings, construction and renovation sites
- Food courts and hotel kitchens
- Automobiles, rail, air and sea transport vehicles

The Singapore institute seeks licensing partnerships with industrial players (MNEs/SMEs of all sizes) to commercialise this technology.

Advantages and Innovations

The advantages of the technology include:

- Flexible and modular design
- Cost-effective fabrication methodology
- Sustainable and recyclable material structures

Stage of Development

Prototype available for demonstration

IPR Status

Secret Know-how

Comment Regarding IPR status

In the midst of provisional patent application in Singapore.

Profile Origin

Private (in-house) research

Keywords

Technology

02006004	Installations related to construction (energy, lighting, …)
02007005	Composite materials
03007	Sound Engineering/Technology
10001001	Acoustic safety
10002014	Noise Pollution

Market

08001009	Speciality/performance materials: producers and fabricators
08001015	Other speciality materials
08004004	Other pollution and recycling related
08005	Other Industrial Products (not elsewhere classified)
09007002	Manufacture of construction materials, components and systems

NACE

C.32.9.9	Other manufacturing n.e.c.
F.43.9.9	Other specialised construction activities n.e.c.

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Environment
Materials
Sustainable Construction

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

Singapore

Partner Sought

Type and Role of Partner Sought

The Singapore institute seeks to partner industry players (SMEs of all sizes or MNEs) through licensing collaboration.

The partner could license the technology to further develop it into new product/service to serve the needs of its customers.

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

4.
MATERIALES

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Offer

New multifunctional material for catalysis application

Summary

A Spanish university has developed a foamed material comprising a structural matrix (metal, polymer, ceramic or mixtures of these materials), at least one host phase (functional material), and a fluid (liquid/gas). These materials have many potential uses, among which one is as a catalyst material or as a support for catalysts. Catalysts manufacturers interested in the commercial exploitation of this technology are sought through patent licensing agreements or technical cooperation agreements.

Creation Date	19 September 2019
Last Update	30 September 2019
Expiration Date	30 September 2020
Reference	TOES20190919001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/79d8cb2f-a688-4605-a2d9-28e5278144a0

Details

Description

Interconnected pore foamed materials have been known for a long time. The replication method is the one that allows the best control of the obtained material, offering materials with multiple advantages.

Foams manufactured by replication have a wide spectrum of applications. Some of them have proved to be suitable as support for catalysts in gas or liquid phase reactions, since the presence of interconnected pores allows the passage of fluid through them and therefore they can be used in continuous reactors. However, their use has not been extended for this application due to the fact that foams intended to be used as support for catalysts must meet two, often contradictory, requirements:

(i) foams must have a high specific surface area so as to allow a high dispersion of the catalytically active phase;
(ii) the pore size must not be too small to prevent the pressure drop of the fluid passing through

it from being too large.

In addition, these foams must have a high thermal conductivity in order to favour the transport of heat from or to the outside of the catalytic reactor.

In this sense, a Spanish research group has developed a foamed material with application in catalysis that comprises a structural matrix, at least one host phase and a fluid.

This foamed material is characterized because the structural matrix comprises a plurality of interconnected porous cavities, the host phase is housed within at least one porous cavity of the structural matrix and the fluid is housed within the porous cavity (Figures 1 and 2).

The host phase(s) of the foamed material can be housed in all or part of the porous cavities, leaving the host phase free and the rest of the cavities completely occupied by the fluid (Figure 2).

This material is particularly useful as a catalyst material or as a support material for catalysts. The material allows catalytic active materials to be housed in the host phases and ensures that the passage of fluids through it. In addition, this material can be considered multi-catalytic when different host phases are combined, which allow the different catalytic centres to be physically separated.

In addition to this use, foamed material can also be used:
• For the controlled release of chemicals or pharmaceuticals.
• For the adsorption of gases, liquids or dissolved solids.
• As an implant material.
• As a filter for inorganic or biological substances.
• As a magnetic material.
• As impact absorbing material in passive safety parts of land, air and sea transport vehicles.
• As an electromagnetic radiation absorber material for conversion into heat or electrical energy.
• As radar wave resonator material, applied in radar invisibility technologies.
• As a template material for crystalline growth in the gap between the structural matrix and the host. phase(s).

The research group is mainly looking for catalysts manufacturing companies interested in acquiring this technology for its commercial exploitation through license agreement. The company should be responsible for the development of the industrial scale up, the validation of the technology, its manufacture and its introduction into the market. The university will be ready to provide technical assistance in each step if required.

However, the research group would be also interested in establishing technical cooperation agreements to further develop this material, to find new applications or to adapt it to the company's needs. The goal of this type of collaboration would be increasing the technology readiness level for a future commercial exploitation of the patent. The university would offer its support based on their know-how; while, the partner sought would provide its expertise to help improve this invention. The university would offer this partner a preferential option to acquire this technology in exclusivity.

Advantages and Innovations

In the field of catalysis there is no material with the characteristics of the described material. Then, the most innovative aspect of this technology is the development of a new foamed materials of simple manufacture and with improved properties whose functionality is not limited

by the material of which the foamed material is made, as well as by the size, shape and size distribution of their pores.

The foamed material described has the following advantages:
• Since the structural matrix and the host phase(s) are not bonded, both fulfil their functionality independently.
• The matrix phase can be of a material that has good mechanical and thermal properties, so that it can withstand mechanical stresses derived from industrial catalytic use and adequately transport heat to or from the reactor.
• The host phase(s) can be a material with varied mechanical properties and with a high specific surface area (functional material), so that the material as a whole has a higher surface area than conventional foams used in catalytic applications.

The competitive advantages of this material with respect to those used in catalysis are the following:
• With suitable graphite or metallic matrices, materials with very high thermal conductivities are obtained, which allow the heat to be transported to or from the reactor.
• With high specific surface host phases (e.g. active carbons, zeolites, etc.) much higher specific surface values are achieved than conventional ones measured for foams (0.3 m2/g) or foams with nanoparticles on the porous surface (<1m2/g).
• The host phase(s) can be a catalyst material or support catalysts and its catalytic functionality is ensured by its configuration in the final material.
• Multi-catalytic materials can be designed by combining different host phases with the advantage that the catalytically active centres are physically differentiated.

Stage of Development

Under development/lab tested

Comments Regarding Stage of Development

The material has been developed on a laboratory scale, although the infiltration processes are easily scalable.

IPR Status

Patents granted

Comment Regarding IPR status

Spanish patent already granted. PCT applied for.

Profile Origin

Other

Keywords

Technology

02007006	Fine Chemicals, Dyes and Inks
03004002	Inorganic Substances
05001003	Inorganic Chemistry

Market

08001017	Industrial chemicals
08001019	Speciality/performance chemicals
08001023	Other chemicals and materials (not elsewhere classified)

NACE

M.72.1.9	Other research and experimental development on natural sciences and engineering
P.85.4.2	Tertiary education

Network Contact

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Materials

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1979

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Industries.
- Specific area of activity of the partner: Catalyst manufacturer companies.
- Task to be performed:
 * In the license agreement: to buy a license for the technology, to further develop it to the industrial scale and to introduce it into the market.
 * In the technical cooperation agreement: to provide their expertise in order to collaborate with the scientists on further development and improvements of the technology. The company should identify technical requirements and/or market and client's needs in order to carry out further technical development so that the market readiness will be increased and the technology could be commercially exploited.

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

Attachments

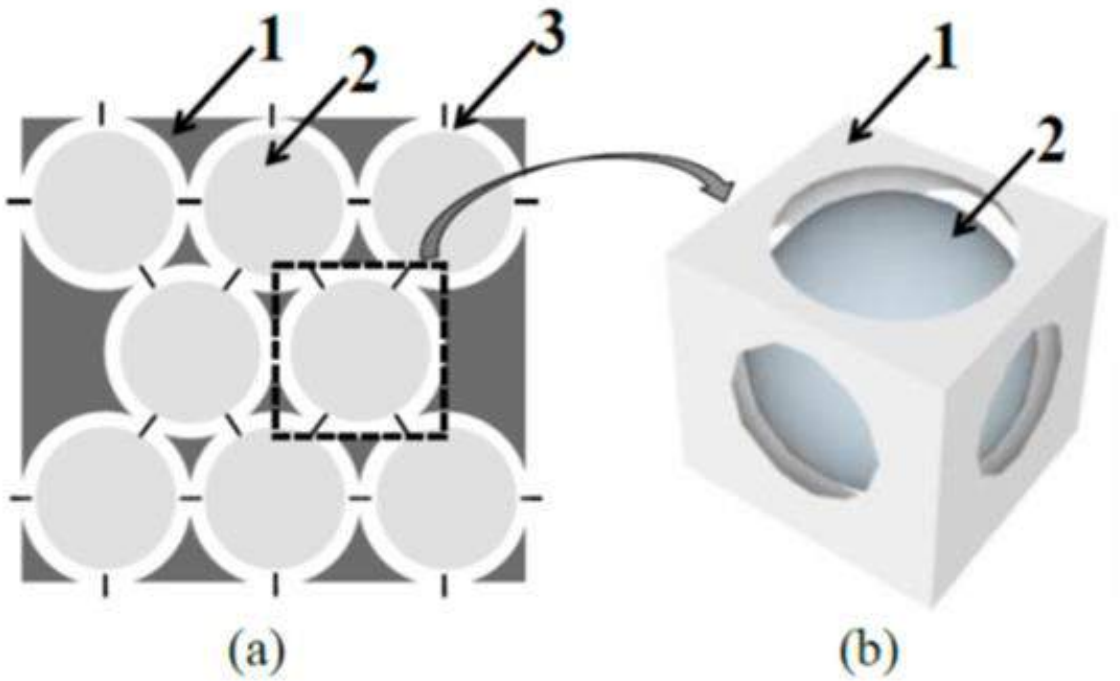

Figure 1. *Schematic illustrating the interconnection of existing pores in a foamed material with structural matrix (1) and with host phase (2) and the way in which a host particle is housed in a porous cavity (3) of the foamed material. (a) two-dimensional drawing in which the lines represent interconnecting openings between pores; and (b) three-dimensional representation of a representative volume fraction containing a host particle housed in a porous cavity.*

Figure 1

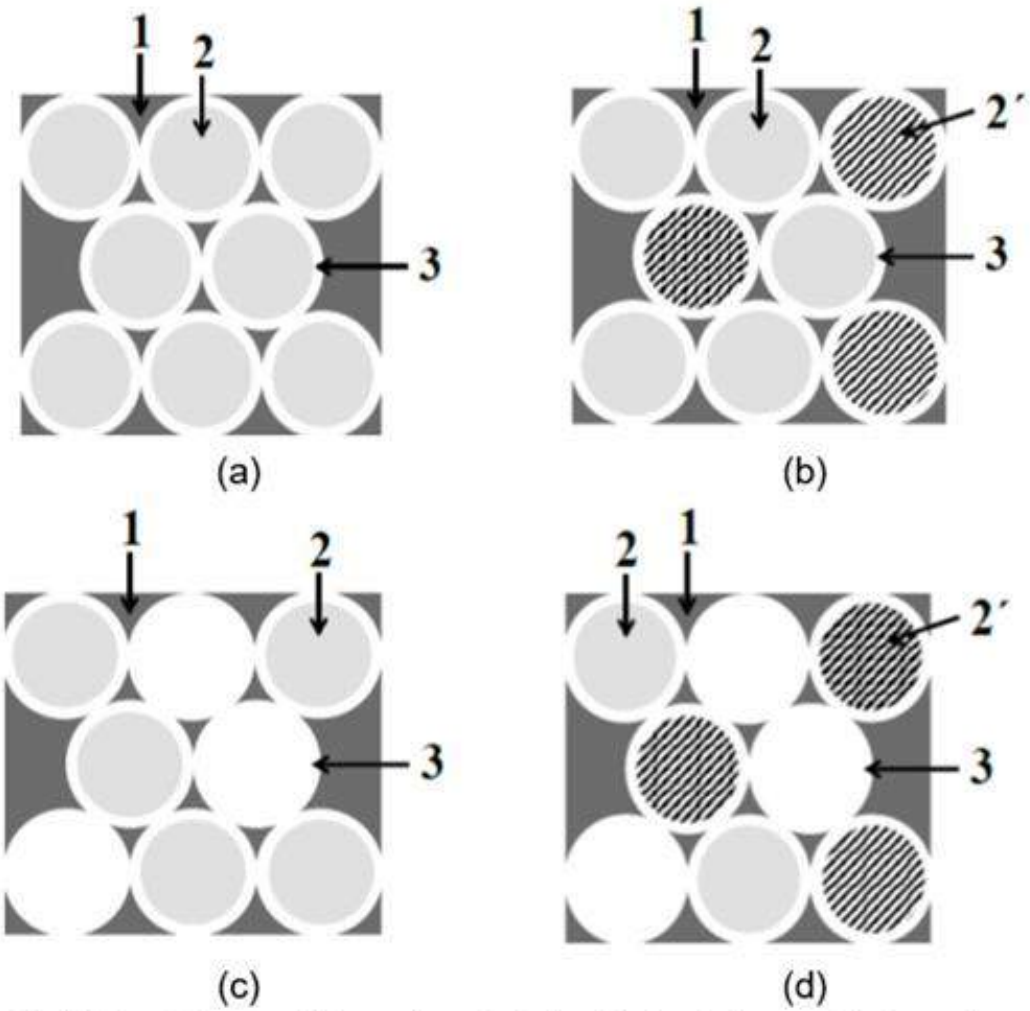

Figure 2. *Different types of foamed materials with host phases that can be obtained depending on the type of porous preform from which they are departing and with host phases that do not maintain union with the structural matrix. The legend corresponds to that in Figure 1: 1 is the structural matrix, 2 is the host phase and 3 is the porous space occupied by fluid or vacuum. 2' corresponds to a host phase other than 2. The porous cavities not occupied by the host phase are free to be fully occupied by the fluid or vacuum.*

Figure 2

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Request

Circular economy environmental solutions sought for the printing industry

Summary

An Austrian company has started the first Cradle-to-Cradle community in the printing industry and wants to spread it all over Europe and beyond. Therefore they are looking for sustainable environmental technologies, materials and processes in the printing value chain. They are looking for research and technical cooperation agreement to develop or introduce new products to the market as well as for commercial agreement with technical assistance. Areas of focus include paper, adhesives, chemicals.

Creation Date	17 September 2019
Last Update	20 September 2019
Expiration Date	20 September 2020
Reference	TRAT20190917001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/172867f6-c1ed-413c-8f65-2c566062bdbc

Details

Description

The Austrian company is a printing and communication company which aims to reach the highest possible standard for ecological and healthy printing. The company produces high-quality sheet-fed offset and digital printing products ranging from business cards to books.

Ten years ago they started a circular economy project to develop print products that are free from harmful substances and can be returned to the biological cycle based on the Cradle to Cradle Certification Standard. Cradle to Cradle (C2C) means that resources circulate from the cradle to the cradle, instead of going one way from the cradle to the grave. All resources are technically or biologically recycled and none are wasted. This is a truly sustainable production: not trying to be less harmful, but to actually be eco-effective and do the right things straight from the beginning. Materials are considered to be like nutrients that can circulate in cycles on a permanent basis so that no waste is produced.

The production process of print products has been checked against Cradle to Cradle Certified™ Product Standard for its environmental impact throughout the whole product life cycle. To implement the concept, existing materials had to be replaced with healthy and eco-sensitive materials. As this was not possible in all cases, some components even had to be newly developed by the company. Cradle to Cradle print products have been developed for the biological cycle. They are suited for composting, combustion and cellulose recycling without harming human-beings or the environment.

After getting the C2C certification, the Austrian company founded together with partners from Denmark and Switzerland a sustainable printing community in 2019 with the headquarters in Austria with the legal form of a pan-European cooperative. The goal of this community is to share existing expertise, to promote C2C-print in Europe and beyond and develop together further printing components. Through the cooperative it will be guaranteed that the eco-effective and healthy printing products are produced locally where they are needed and therefore don't have to be shipped over long distances. The cooperative, among others, builds a buyers' group, which makes it possible to encourage the suppliers to change and to improve their products and raise the awareness of all customers for the necessity of changing the way of producing products in order to reach a truly sustainable economy.

Therefore the cooperative is interested in any kind of research results, technologies and products focusing on sustainable printing applications.

Specifically, the cooperative is looking for research and technical cooperation agreement with companies or research institutions active in the field of circular economy along the printing value-chain. Together they aim to partner in order to develop new products and materials. The cooperative is also looking for new suppliers or partners wishing to establish a commercial agreement with technical assistance or new partners wishing to offer C2C services and certification, carry out assessments of new products and benefit from the know-how of the cooperative.

Technical Specification or Expertise Sought

The cooperative aims to optimise more materials for the Cradle to Cradle certification, in order to be in a position to meet any request from a customer in the future. The community plans to collaborate on further development projects. They have currently defined the following development areas:
-range of further papers and cardboards,
-envelopes,
-film lamination,
-range of varnish,
-range of glues for post press.

Further expertise may include adhesives, alternative binding techniques, alternative packaging (plastic-free) or closing the cycle by producing a recycling paper that is exclusively made of Cradle to Cradle Certified™ paper waste.

All potential materials should be certified or eligible for certification. This means that all of their constituent substances must be known, i.e. all chemicals be identified in terms of their Chemical Abstracts Service registry numbers (CAS no.) and all constituent substances have to be suitable for the biological cycle regarding their toxicological and eco-toxicological properties.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Keywords

Technology

02007001	Adhesives
02007013	Paper technology
07002002	Paper Technology

Market

09004007	Printing and binding

NACE

C.18.1.2	Other printing

Network Contact

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Open for EOI : Yes

Dissemination

Relevant Sector Groups

Creative Industries
Environment
Materials

Client

Type and Size of Organisation Behind the Profile

Other

Year Established

2019

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German

Client Country

Austria

Partner Sought

Type and Role of Partner Sought

Type of partner sought:
University, research organisations and companies

1) Research cooperation agreement: coordination and initiation of international research projects in the field of circular economy and especially along the printing value-chain, e.g. joint projects for materials development.

2) Technical cooperation agreement: the cooperative is always on the search for new suppliers to add improvements to the current processes and to add new materials to the production process. The cooperative is looking for suppliers of the products currently in its priorities (papers, adhesive, binding techniques) but is also open for completely new and innovative materials.

3) Commercial agreement with technical assistance: forward-thinking printing companies who want to get involved with this community to reach a big coverage for clients with Cradle to Cradle Certfied™ products and be the role-model industry when it comes to sustainable economies. Through the commercial agreement with technical assistance, new partners could join the cooperative, offer C2C certification as a service or carry out assessments of new products and benefit from the know-how of the cooperative in the C2C certification and 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

Commercial agreement with technical assistance
Technical cooperation agreement
Research cooperation agreement

5.
TRANSPORTES

enterprise europe network

Partnering Opportunity

Profile Status: Published

Technology Offer

Korean company offers solar powered road lighting device

Summary

A Korean SME specialized has developed a solar powered road lighting device. This prevents possible tunnel accidents by altering the color of light in accordance with the traffic and road situation; and going below the road surface when vehicles directly pass over. The company wants partners to conclude license agreement to obtain the technical know-how. In addition to that, commercial agreement with technical assistance are expected to further commercialize the product in international markets.

Creation Date	29 August 2019
Last Update	24 September 2019
Expiration Date	24 September 2020
Reference	TOKR20190625001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/798a8e11-2e4e-4ade-b3c1-2a7a40fa894d

Details

Description

The Korean company was established in 2015, specializing in traffic-safety facility production and has developed a road lighting device. It possesses both Korean and US patent about solar road marker. The company's product has its uniqueness as it is automatically operated upside down, thus preventing damage in the road, and the product itself. The purpose of this product is to distinguish the road lane but at the same time, guides drivers on the traffic and road situation, with its self-utilizing road lighting system day and night.

There have been traffic accidents due to a lack of understanding of road systems and road signs, which are often projected and get damaged by external forces. To amend the current issue, the company's technology enables the superstructure of a road lighting device to be absorbed inside when the external force is applied, thus improves the durability. This buffering action is carried out when more than 15kg is applied, such as vehicles. By doing so, the product

can reduce road damage and prevent the possibility of an accident in projections and vehicles. At night time, the road lighting device would be illuminated with the stored solar energy during day time. Not only this but also lane departure accidents are expected to be reduced with varying colors of solar road light, especially under heavy rain, snow or fogs.

This technology is operated automatically by analyzing the situation via closed-circuit television (CCTV) without any specific conductor needed. The color of the road lighting device would be altered from green to red when an accident is spotted. As a result, the technology would reduce the rate of second rear-end impacts by giving warnings to the rear driver and prompt settlement.

Under the license agreement, their technology would be transformed into the forms of loyalty or specific payment. By doing so, the potential partner can obtain road lighting technology and get the know-how to further develop the item.

Furthermore, the company expects commercialization under the commercial agreement with technical assistance. This would enable the promising partner to get practical advice in processing the technology.

As a result, these agreements would enhance the company and partners' efficiency in operating the technology in international market.

Advantages and Innovations

 Enables the superstructure of a road lighting device to be absorbed inside when the external force is applied
 Avoids self-damage and improve durability, by preventing the weight of the vehicle to be reached
 Prevents the traffic accident by clarifying the road lane with LED lights
 Reduces the rate of second rear-end impacts, warnings to the rear driver and prompt settlement

Stage of Development

Prototype available for demonstration

IPR Status

Patents granted

Profile Origin

Private (in-house) research

Keywords

Technology

01004003	Applications for Transport and Logistics
02008005	Road Transport
02008006	Traffic Engineering / Control Systems
04005005	Solar/Thermal energy

Market

06003001	Solar/thermal energy
09001006	Airfield and other transportation services

Network Contact

Issuing Partner

AGENCIA ANDALUZA DEL CONOCIMIENTO

Contact Person

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

0

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English

Client Country

South Korea

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: SMEs, Research Institute, Large company

- Specific area of activity of the partner: The area should include road transport, traffic engineering or control system to effectively develop in its competitiveness. To fully understand the usage of a device, knowledge in solar energy would be preferential.

- Task to be performed: Merchandising products based on a commercial agreement with technical assistance, targeting European nations.

With the product's nature, the company wants to explore more international opportunities in the transport services market.

Also, the transfer of technology is expected under the license agreement. By doing so the partner can develop more competitive and effective solar related product.

Type of Partnership Considered

License agreement
Commercial agreement with technical assistance

Attachments

changes the color of light