Profile Status: Published

Technology Offer

French Technology Transfer Office proposes a new backpack design and patent for extreme outdoor professional or sports and leisure activities

Summary

The French TTO (Technology Transfer Office) is acting on behalf of a research lab of a design school in the Paris region. This lab has designed a new shock-protection device to be used as a compact and modular backpack for extreme outdoor conditions. It is dedicated to professionals and non-professionals traveling, practicing outdoor activities, facing extreme climate and shock conditions. The French TTO is looking for partners interested by a license agreement or a technical cooperation.

Creation Date	19 February 2018
Last Update	20 February 2018
Expiration Date	20 February 2019
Reference	TOFR20171117002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/ca32bdcd-7fbc-4eba-9c67-b53b7bf1cdff

Details

Description

The French TTO (Technology Transfer Office) is acting on behalf of a research lab of a major industrial design school in the Paris region. This research lab has designed an innovative backpack which includes an extended shock-protection device, a modular internal architecture with easy-access parts dedicated to fragile equipments.

Two market challenges are encountered.

1- Professional equipment : backpack transportation of any expensive and fragile material needs a strong climatic and schock protection. This fragile material may be a camera or any device with sensors for diagnosis or control. professionals such as photographs, rescue and medical staff, outdoor industrial or building site maintenance staff, servicemen...may be concerned. A preliminary study showed a strong interest from camera users, which can be enlarged to other professionals using other fragile materials.

2- Sports and leisure equipment : this kind of backpack is also requested by sportsmen and consumers practicing outdoor activities (hiking, riding...) who want to keep their personal equipement safe on the way and easily reachable.

A research lab within an industrial design school from Paris region responds to these challenges and offers a solution with the following characteristics :
The solution is waterproof, compact, modular (with compartments) and easy to carry. It provides protection against impact and eases access to devices and equipment. It enhances the comfort during travels and stops because the rigid body can be used to support any digital object or to seat . It can be customized to adapt to all professional uses such as public and specialized media reporting, rescue and emergency medicine, industrial maintenance, scientific or military use...

The kind of partnership that is requested may be a license agreement or a technical cooperation agreement with companies operating in the professional or sports and leisure equipment markets.

Advantages and Innovations

On one hand, shock-protection bags are widely proposed with professional equipments. These bags can only be used with the specific equipment, wthout any additional space for other tools or material. They are mainly designed as handling bags or suitcases which are strictly unconvenient while walking or climbing with environmental constraints.
On the other hand, sports and leisure bagpacks are designed to contain equipment, clothes and food with no need for a strong shock-protection. Besides, the only parts with an easy and fast access are designed for small objects such as a can or a smartphone. There is no way to catch a medium -sized equipment while holding the backpack.

In order to face the above-mentioned recquirements, a solution has been designed and patented by a design school research lab in Paris region. The device can be used as a backpack with the following advantages :
- strong shock-protection of the whole content,
- waterproof,
- direct individual access to each modular part of the backpack
- structure and body designed to be used as a seat

Stage of Development

Prototype available for demonstration

Comments Regarding Stage of Development

Three functional prototypes have been designed.

IPR Status

Patents granted

Profile Origin

National or Regional R&D programme

Keywords

Technology

02002013	Moulding, injection moulding, sintering
02007014	Plastics, Polymers
02007018	Advanced Textile Materials
02007019	Lightweight materials

11007	Sports and Leisure

Market

05004002	Rescue and emergency equipment
07001004	Sporting goods, hobby equipment and athletics clothes
07002002	Clothing and shoe stores
09004003	Textiles (synthetic and natural)
09004006	Packing products and systems

NACE

C.14.1.9	Manufacture of other wearing apparel and accessories
C.32.9.9	Other manufacturing n.e.c.
M.72.1.9	Other research and experimental development on natural sciences and engineering
Q.86.9.0	Other human health activities

Network Contact

Issuing Partner

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Open for EOI : Yes

Dissemination

Send to Sector Group

Textile and Fashion

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
French

Client Country

France

Partner Sought

Type and Role of Partner Sought

The partner sought is a company interested in a license agreement. The partner should have a clear industrial application in mind and a strong technical background.
In case the partner needs additional points to be designed and put with the proposed solution, a technical cooperation agreement can also been considered.

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement
Technical cooperation agreement

Attachments

backPack01.jpg



backPack03.jpg



backPack02.jpg


ROBUST & WATERPROOF SHELL
EXTERNAL FRAME
MODULAR COMPARTMENTS
QUICK ACCESS

Profile Status: Published

Technology Offer

Tailored materials development for 3D printing with Fused Deposition Modelling (FDM) technology.

Summary

A Spanish research centre, specialised in plastics and composite materials, offers development of tailored polymer materials for 3D printing. The centre is equipped with high performance single-spindle extrusion equipment and a twin-screw extruder for mixtures.It is looking for partners as 3D additive manufacturers coming from a wide range of sectors (automotive, aeronautics, etc) and 3D printing machine manufacturers, interested in research, technical cooperation and services agreements.

Creation Date	27 October 2017
Last Update	08 November 2017
Expiration Date	08 November 2018
Reference	TOES20171027003
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/ff95c8d9-d9b9-4205-bbaa-31cc59e10255

Details

Description

A Spanish research and development (R&D) institute specialised in plastics and composite materials offers its expertise, design assistance and consulting to 3D additive manufacturers industry and research willing to develop tailored polymer materials for 3D printing with Fused Deposition Modelling (FDM) technology.

Its R&D team is involved in a continuous open-innovation line-management process in order to accrue enough knowledge and capacities to face any challenging research project for industry offering theree high-tech and excellent research areas:
• Polymers and biopolymers, composites: synthesis, formulation and transformation of plastics from renewable sources.
• Sustainable management: life cycle assessment and life cycle costing assessment, environmental product declaration, product categories rules, eco-design, waste revaluing.
• Software engineering: FIWARE applications, internet of things, big data...

The materials department has performed an intensive work in development of new materials from renewable sources developing new plastics formulations, process and final products. In practice, the institute's skills include:

- Materials and filaments development: Tailored materials, for the manufacture of filaments for

technical parts, fibres of natural origin and fibres from recovered materials recycled. For the development of new filaments for 3D FDM printing in a wide range of polymer matrices, the R&D centre is equipped with high performance single-spindle extrusion equipment.

- Formulation and compounding: Formulations of materials on demand. The research centre is specialized in high performance thermoplastics, biomaterials, nano additives and other particles as well as the combination of materials with additives to achieve the desired functions for 3D FDM printing.The R&D centre is equipped with twin-screw extruder for mixtures.

- Rapid prototyping: The research institution has capabilities for FDM printing of parts and prototypes, for the testing and validation of materials and filaments developed and for quality control and manufacturing standards.

- Test and analysis capabilities: The research centre has the knowledge and equipment for the characterization of plastic materials, with ENAC 772 / LE 2003 accreditation:

The R&D centre would like to collaborate with industries, under services agreement, needing to integrate R&D into their products and projects development processes, coming mainly from 3D additive manufacturers mainly coming from automotive, aeronautics, food packaging, sports and construction materials, moulds and smelting, electronics, machine tool, etc.

The centre is interested in research cooperation agreements and technical cooperation agreements with industry but also with research institutes. They are also open to collaborate in the frame of European 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.

The centre has advanced techniques, which enables the discovering of the characteristics, behaviour and properties of the polymeric materials. Depending on the results obtained, the R&D team will select for each case the material that guarantees the required in-service quality and behaviour.

The centre designs new materials – not only to improve the properties, but taking into consideration the technical specifications of the product, its manufacturing processes and the cost objectives which have been set.

Stage of Development

Available for demonstration

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Keywords

Technology

02001001	3D printing

02007005	Composite materials
02007014	Plastics, Polymers
02007019	Lightweight materials
02007020	Biobased materials

Market

05005015	Orthopaedics
07001004	Sporting goods, hobby equipment and athletics clothes
08001006	Processes for working with plastics
08001018	Polymer (plastics) materials
09003001	Engineering services

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
Spanish

Client Country

Spain

Partner Sought

Type and Role of Partner Sought

The R&D centre would like to collaborate with industrials wanting to develop projects and products including new polymers materials such as composite or thermoplastics materials, for 3D (FDM) printing or other manufacturing processes through technical cooperation or services agreement.

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 European projects.

Type and Size of Partner Sought

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

Type of Partnership Considered

Services agreement
Technical cooperation agreement
Research cooperation agreement

Attachments

Profile Status: Published

Technology Offer

Smart textiles

Summary

A German company develops and constructs electrically heating textiles using a range of different conductive yarn systems, and is employing all available textile technologies, such as woven, knitting, and embroidered raschel fabric and is hence able to supply its customers with precisely the customised heating textiles they require. The company seeks partners from research and industry for a technical cooperation and/or commercial agreement with technical assistance.

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Last Update	16 October 2017
Expiration Date	16 October 2018
Reference	TODE20170831004
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/1932350a-c7f1-418f-bba1-850eb95056f0

Details

Description

The German SME with its long-term experience in research and development of smart textiles wants to bring the developed prototype into the market. The company is interested in ideas of potential applicators, to adapt the prototype on the costumer specific needs.

The specially conductive yarn systems are constructed from:
- plastic fibre coated with an electric conductor
- base yarn wrapped with thin metallic filaments
- electrically conductive substances incorporated in the spinning process

The company develops and constructs electrically heating textiles using a range of different conductive yarn systems and is employing all available textile technologies, such as woven, knitting, embroidered raschel fabric and others.

Heated knitwear electrically conductive yarns are incorporated in a mix, together with normal textile yarns, to produce the final knitwear. This allows flexible textile areas to be manufactured which can be electrically heated. These can be operated via the textile surface.
Features: Width: 1,70 m length, available in rolls electrical performance: max. 1250 W/m², power supply: low voltage (up to max. 42 V)
Heated fabrics electrically conductive yarns are incorporated in a mix, together with normal textile yarns, to produce the final fabric. This allows non-flexible textile areas to be manufactured which can be electrically heated. These can be operated by a woven in power supply channel. The heated fabric can also be electrically operated via contacts at its surface.
Features: Width: up to 5 m length: available in rolls, electrical performance from 1 - 1250 W/m²,

as required electrical contacts integrated into the fabric, or see conductive bands.

Current and potential domain of application:
- Heated seat upholstery
- Heated couches
- Heated vehicle seating
- Heated carpets
- Heated clothing elements
- Heated chairs

The company is looking for partners from research for a joint further development of the technology in the frame of a technical cooperation agreement.
Partners from industry are sought for the transfer of the smart textile in with support of the German company within a commercial agreement with technical assistance.

Advantages and Innovations

The technology comes along with low price guarantee. The development allows products with excellent properties. Another advantage is a wide range of applications. In addition, the possibility for producing costumer oriented products is always an advantage and a chance for joint further development, too.

Stage of Development

Available for demonstration

IPR Status

Secret Know-how

Profile Origin

National or Regional R&D programme

Keywords

Technology

02007018	Advanced Textile Materials
03005008	Weaving related to Textiles Technology
03005009	Woven technical textiles for industrial applications
04007004	Thermal insulation

Market

05003006	Other therapeutic (including defibrillators)
05007007	Other medical/health related (not elsewhere classified)
07001004	Sporting goods, hobby equipment and athletics clothes
07004008	Other consumer products

NACE

C.13.2.0	Weaving of textiles

C.13.3.0	Finishing of textiles
C.13.9.6	Manufacture of other technical and industrial textiles
C.13.9.9	Manufacture of other textiles n.e.c.

Network Contact

Issuing Partner

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Open for EOI : Yes

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

1998

Turnover

<1M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

In case of partners interested in the technology, product sheets are available.

Languages Spoken

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

The company is very interested in partners from industry and/or research for a joint further development of the technology.
But also partners with special requests according a new product are highly welcome to find new application for the electrically heating textiles.

Type and Size of Partner Sought

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

Type of Partnership Considered

Commercial agreement with technical assistance
Technical cooperation agreement

Attachments

electronically heating textile.jpg

