

Technology Offer

Multilayer composite textiles for medical application

Summary

Ukrainian University have developed planar composite textiles that consists of 3 and more individual textile layers with its specific design and functions. Such textiles can be used to produce medical and healthcare materials (medical bedsheet and textiles) as well as textiles for technical applications. The developers are looking for industrial partners that are active in innovative textile industry. Partnerships considered are licensing or technical cooperation agreements.

Creation Date	19 July 2016
Last Update	02 August 2017
Expiration Date	30 January 2018
Reference	TOUA20160718001

Details

Description

Multilayer composite textiles of “sandwich” structure consist of several textile layers (3 and more). The individual textile layers with different properties are bonded using a special glue web.

A roll-to-roll adhesive technology was used to produce composite textiles. In case of their medical application the textile layer that directly contacts with human skin is selected in accordance to the following criteria – softness, hypoallergenicity, hydrophobicity, excellent capillarity and smoothness. The last layer serves as a barrier to metabolic products of human body. The internal layers have to absorb, transport, accumulate, distribute these metabolic products. A detailed design of the multilayer composite textiles as well as their features are described in patents. A set of novel characteristics of developed textiles indicate their economic and social efficiency. Thanks to wide range of properties, developed textiles also can be recommended for use in engineering. The scientists are looking for partner(s) to identify the best way of distribution of the developed textiles. They are interested in licensing and/or technical cooperation agreements.

Advantages and Innovations

- The design of multilayer composite textile allows to combine a great number of properties (even opposite) such as hypoallergenic/antimicrobial properties, quick and high water absorption, capillarity, smoothness and excellent waterproofness in one material.
- The multilayer composite textiles can be produced on different types of continuous fusing press in a single working phase.

The textiles contain a different number of layers that enable to customize their properties as well as to change/widen areas of their application.

Stage of Development

Available for demonstration

IPR Status

Patents granted

Comment Regarding IPR status

Patents of Ukraine

Profile Origin

National or Regional R&D programme

Keywords

Technology

02007018	Advanced Textile Materials
03005007	Textile fibres
06001022	Medical Textiles

Market

05007007	Other medical/health related (not elsewhere classified)
07006	Other Consumer Related (not elsewhere classified)
09004003	Textiles (synthetic and natural)

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

Send to Sector Group

Textile and Fashion

Client

Type and Size of Organisation Behind the Profile

University

Year Established

1930

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
German
Russian

Client Country

Ukraine

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Industry; R&D institute/university
- Specific area of activity of the partner: innovative textile industry; manufacturing of textiles for health care and other technical application; textile engineering
- Task to be performed: to evaluate application and consider licensing or other partnering options (developing a joint project etc.)

Type and Size of Partner Sought

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

Type of Partnership Considered

License agreement
Technical cooperation agreement

Attachments



Technology Offer

High performance textile structures for composites through open reed weaving

Summary

A German university offers licenses for enforcement fabrics for textile composites that combine the advantages of multiaxial reinforcement and good drapeability. The production is based on open reed weave. Application potential is in shell components. The feasibility has been proven. Industrial partners are sought for licensing agreements.

Creation Date	06 January 2016
Last Update	10 July 2017
Expiration Date	13 January 2018
Reference	TODE20160106001

Details

Description

Current textile products have many limitations regarding their effectiveness and lifetime due to the limited needle shifting in state of the art weaving systems. Fiber properties are highly dependent on loading direction and even a small angle deviation can cause a significant performance drop. Only small areas of multiaxial fabric can be obtained by the existing production methods and the load path is constantly interrupted.

Scientists at a German university filed a patent relating to the production of the multiaxial enforcement fabrics for textile composites with ORW (Open Reed Weave). The technology helps avoid load path interruptions in composites with textile enforcement. An overlapping of two yarn systems in the textile is created by means of a special weaving pattern. It leads to a continuous load path in bias direction, thus producing a "triaxial" fabric, which is the main approach of the investigation.

The angle of additional reinforcement direction is adjustable and the calculated necessary overlapping is 16.28 mm length. The capability of the system was verified by conducting three-point bending tests. These are performed varying the overlapping length, testing carbon and glass fibers and using reference samples as follows: [0/90°] fabrics and [0/90/45°] fabrics with continuous reinforcement. The results were successful in all cases.

Application:

The developed new textile structure has a high potential for reinforcing shell components with complex load cases. By the additional load bearing direction within the fabric the general part stability can be increased significantly where usually, +/-45° layers have to be used. These +/-45° layers cause a lot of waste, especially in complex geometries where woven fabrics have to be used due to their good drapeability.

The use of the newly developed triaxial fabrics can reduce this waste about 25 %. Additionally,

the number of necessary process steps for the lay-up can be reduced due to the integrated fiber orientations.

Industrial partners are sought for licensing agreements. Partners could be manufacturers of fiber reinforced components, e.g. shell components. They should participate in the ongoing further development tasks.

Advantages and Innovations

- Integrated third load bearing direction in woven fabrics
- Combines advantages of multiaxial reinforcement and good drapeability
- Time and resources savings by reducing waste and production steps
- Design flexibility of ORW for precise load path tracing
- Vast commercial potential for shell structures with complex load cases

Stage of Development

Under development/lab tested

Comments Regarding Stage of Development

The invention could prove its feasibility in numerous experiments.

Further investigations are still needed in this field. The machine setup has to be adapted for being able to realize the developed weave design. Additionally, more material combinations have to be investigated. For these materials, an extensive characterization of the fabric and composite properties is required for an industrial application. Based on these data, rules for a most efficient fabric design with optimized material efficiency have to be established.

IPR Status

Patent(s) applied for but not yet granted

Comment Regarding IPR status

An international PCT patent application has been filed. Further International applications are still possible.

Profile Origin

Private (in-house) research

Keywords

Technology

02007	Materials Technology
02007005	Composite materials
02007018	Advanced Textile Materials
03005008	Weaving related to Textiles Technology
03005009	Woven technical textiles for industrial applications

Market

08001004	Fibre-reinforced (plastic) composites
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08001009

Speciality/performance materials: producers and fabricators

09004003

Textiles (synthetic and natural)

NACE

M.72

Scientific research and development

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

University

Year Established

0

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

Ref: TODE20160106001

English
German

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

Industrial licensees are sought. They can be manufacturers of composites, e.g. shell components that need reinforcing. They should be interested in joining the investigations regarding new material combinations and machine set-up.

Type of Partnership Considered

License agreement

Attachments

illustration.jpg

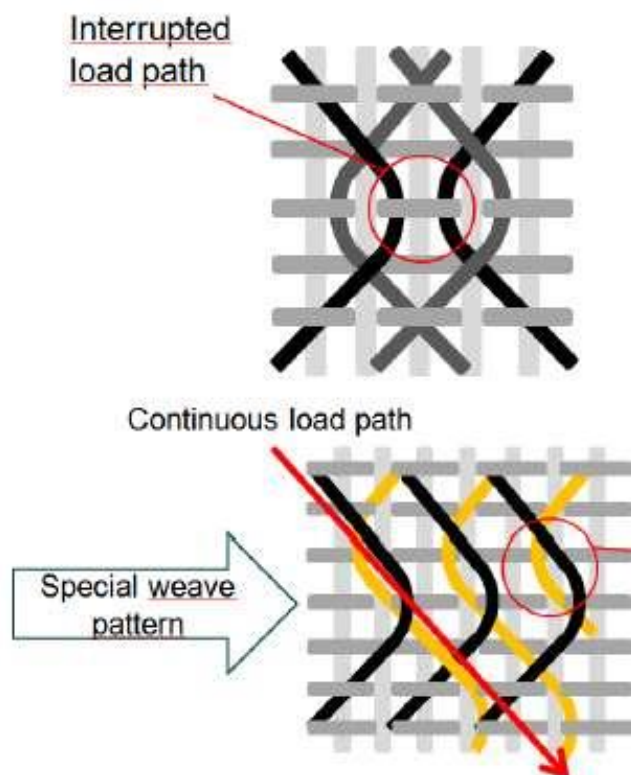


Fig.: Overlapping: joining through matrix material

Technology Offer

Dutch identification-as-a-service provider is looking for international partners that require highly reliable online identification services

Summary

A Dutch identification-as-a-service provider has designed and built an identity solution that allows users to have safe and secure internet transactions. It offers a reliable and simple ID-solution to protect the identity and privacy of the user. The company is looking for international partners for a commercial agreement with technical assistance, a service agreement and/or a technical cooperation agreement.

Creation Date	11 November 2016
Last Update	25 November 2016
Expiration Date	25 November 2017
Reference	TONL20160908001

Details

Description

As more and more transactions take place online, the need for trustworthy digital identities is evident. Currently, online identities are either locally offered by merchants, or by social networks like Facebook or Google, or nationally by governments. These all lack the versatility that is required by both users and websites / merchants in terms of usability, control, trust, international scope and privacy.

The company has developed an identification-as-a-service solution that allows users and merchants to interact. It lets users create personal identities (user accounts) for easy access to online services and shops. This ID solution enables businesses to simplify and improve their customer interaction whilst reducing data risks. It also fulfills the generally accepted needs for privacy, security and trust on the internet and provides users a dashboard to manage their data and consents to share.

This is accomplished by a Federated Architecture (FA), which allows for third party data sources and authentication solutions to be used, and the user managed access control that is incorporated.

The Dutch company provides an identification-as-a-service platform for online interactions while staying away from the interactions themselves. I.e. neutrality and confidentiality are guaranteed. They work with well-established partners that provide systems and services. Together the company provides their customers a high quality identification service that would not be feasible for them to run themselves.

This Dutch company was founded by 2 experienced entrepreneurs with both 20+ years of international business and IT experience.

The service is not bound by sectors nor regions. The company is open to work with partners globally. However given their current company size they may be limited in the number and types of opportunities they can pursue at any moment.

The company is in the process of being certified for ISO27001 and the European Privacy Seal.

Preferably, the partner must 1) either have a need for identification services; e.g. an e-commerce website that has an international scope and has a need for 'outsourcing' their identification services and authentication solutions or 2) be a provider of attribute sources and/or validators that want to cooperate. The company prefers to work with partners that share the same vision of security, trust and privacy.

The company is looking for partners within the framework of technical cooperation agreements, service agreements or commercial agreements with technical assistance.

Advantages and Innovations

In comparison to prevailing techniques the offered ID-solution makes it possible to easily share one's (validated) identity. It allows the end user to control his personal data and manages the levels of authentication required for online interactions.

The ID-solution has the following advantages for the user:

- It replaces the countless identities the user has at all sorts of websites with a single electronic identity, it gives easy access to online services and shops;
- Unlike a social login, such as Facebook or Google, the user keeps ownership of and control over his data;
- The user can control how the identity will be accessed by websites,
- It provides users a dashboard to manage their data and consents to share;
- Ability to use pseudonyms, thus not revealing more personal data than needed;
- Increased security through explicit linking to trusted sites limits the risks of spoofing and typosquatting.

The ID-solution has the following advantages for the websites:

- It creates an easy and reliable visitor sign-on without having to provide user registration facilities;
- It leads to proper recognition of visitors, better service and less abandoned shopping carts at the check out;
- The assurance that transactions with the customers are safe and will not be tracked for other – commercial – purposes;
- It reduces the legal and costly burden of ensuring the integrity and safety of user data;
- The ID –solution is platform independent and easy to implement;

In 2016, the system is being built and field tested prior to intended go live in first half of 2017.

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

Currently building the system for field testing and evaluation prior to intended go live in first half of 2017.

IPR Status

Other

Comment Regarding IPR status

The company's service is built on an open source based technology platform. The architecture is based on several publicly available theories and guidelines. The Dutch company has Non-disclosure Agreements with partners in order to protect the implementation details they share with them.

Profile Origin

Other

Keywords

Technology

01003013	Information Technology/Informatics
01003014	Internet Technologies/Communication (Wireless, Bluetooth)
01006005	Network Technology, Network Security

Market

01004008	Other data communications
02007007	Applications software

NACE

J.63.1.2	Web portals
J.63.9.9	Other information service activities n.e.c.

Network Contact

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Dissemination

Send to Sector Group

ICT Industry and Services

Client

Type and Size of Organisation Behind the Profile

Industry SME <= 10

Year Established

2015

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Experience Comments

The service highly is suited for transnational or international use.

Languages Spoken

English

Dutch

German

French

Client Country

Netherlands

Partner Sought

Type and Role of Partner Sought

The company is seeking for partners:

1. that are knowledgeable in the open identity area and can support or complement the offering;
2. to jointly approach certain (geography/industrial) markets;
3. to get into contact with parties that are seeking to enhance their own customer services by adopting a trusted and secure open identity service.

Partners can be located anywhere.

Type and Size of Partner Sought

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

Type of Partnership Considered

Services agreement

Commercial agreement with technical assistance

Technical cooperation agreement

Attachments
