Profile Status: Published

Technology Offer

Pyrolysis equipment for production of high quality activated carbon

Summary

Belarussian academic institute has developed a pyrolysis equipment for production of high quality activated carbon. Main advantages: - high performance (200 t/year) and efficiency - easy maintenance - continuous automated process. The institute offers technology and equipment under contracts with the customer. Cooperation in a form of commercial agreement with technical assistance or licence agreement are offered.

Creation Date	11 February 2016
Last Update	03 March 2017
Expiration Date	11 March 2018
Reference	TOBY20160211002
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/8c2413aa-87f4-4ce3-85ce-fbc7f4b2a83c

Details

Description

Belarusian academic institute established at 2008 as main organization in the fields of energy security, energy efficiency, renewable energy sources developed equipment for production of high quality activated carbon.

Main activities of the institute are:
- scientific foundation of the strategy of sustainable development of the power engineering complex and ensuring of the energy security
- scientific foundation of the power efficient equipment design
- development of new and improvement of existing technologies for the use of local and renewable energy sources.

Equipment consists of four reactors with insulated walls, designed to accommodate the baskets with raw materials (wood) and to ensure specific temperature mode (drying, calcination, pyrolysis, cooling) in each working chamber.

The main problem of the production of activated carbon and charcoal pyrolysis technologies is large consumption of electrical energy. Equipment uses a 100 kW furnace to start the reactor (only when you start the reactor, or a lack of gas produced during the pyrolysis) and to burn pyrolysis gases generated during operation of the reactor.

Equipment has a flue gas discharge system comprising a fume (main and auxiliary) installed at

the outlet of the combustion device which provide required air flow (draft) for discharge in a chimney.

Automation system of equipment consists of an electronic controller for automatic control of operation modes for a given program, equipped with an interface for connection of temperature sensors installed in the reactor chamber and control of servovalves installed in the system flues used to regulate the gas flow during change of operation modes.

Loading and unloading of baskets with raw materials is done by a crane. The process of pyrolysis equipment OP-800 in each chamber include following steps: loading, drying, endopyrolisys, exopyrolisys, calcination, cooling, unloading.

Specifications:
- loading volume: 4 m3
- loading method: crane
- daily capacity: 750 kg
- annual performance: 200 t
- operating temperature: 650 C
- installed electric power: 64 W
- water consumption: 0.1 m3/day
- water pressure: 0.3 MPa
- thermal power: 100 kW
- control: automatic.

The institute is interested in establishing cooperation in a form of commercial agreement with technical assistance, license agreement and for organization of serial manufacturing of pyrolitic plants for activated carbon and charcoal production.

Advantages and Innovations

Advantages:
- improved quality of activated carbon
- easy maintenance
- high performance and efficiency compared to activated carbon stoves
- continuous automated process
- heat-resistant materials used in construction, ensure high reliability and long service life.

An innovative process technology and equipment for production of activated carbon.

Stage of Development

Available for demonstration

Comments Regarding Stage of Development

Developed: four reactors with insulated walls, designed to accommodate the baskets with raw materials (wood), electronic controller for automatic control of operation modes.

IPR Status

Secret Know-how

Comment Regarding IPR status

The technology is protected by know-how.

Profile Origin

National or Regional R&D programme

Keywords

Technology

02007006	Fine Chemicals, Dyes and Inks
02007020	Biobased materials

Market

08001015	Other speciality materials
08005	Other Industrial Products (not elsewhere classified)

NACE

M.72.1.9	Other research and experimental development on natural sciences and engineering
M.74.1.0	Specialised design activities
M.74.9.0	Other professional, scientific and technical activities n.e.c.

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Open for EOI : Yes

Dissemination

Send to Sector Group

Intelligent Energy

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

2008

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Experience Comments

Academic institute was established at 2008 as main organizanization in Belarus in the field of energy security; energy efficiency; renewable energy sources. Today Institute operate in the field of activities: Scientific foundation of the strategy of sustainable development of the power engineering complex and ensuring of the energy security; Scientific foundation of the power efficient equipment design; Development of new and improvement of existing technologies for the use of local and renewable energy sources.

Languages Spoken

English
Russian

Client Country

Belarus

Partner Sought

Type and Role of Partner Sought

The institute offers the pyrolysis equipment for the production of high quality activated carbon under contracts with the customer (SME, R&D Institution, University).

Commercial agreement with technical assistance:
Field of partner's activity: Other chemicals and materials (not elsewere classified) industry and R&D (especially production of activated carbon)
Type of partner sought: Other chemicals and materials manufacturers and R&D (especially production of activated carbon)
Role of partner sought: buying technology and starting production based on the offered technology and equipment with support of the scientists.

License agreement:
Field of partner's activity: Other chemicals and materials (not elsewere classified) industry and R&D (especially production of activated carbon)
Type of partner sought: Other chemicals and materials (not elsewere classified) manufacturers and R&D (especially production of activated carbon)
Role of partner sought: buying a license and starting production based on the offered technology and equipment.

Type and Size of Partner Sought

University,R&D Institution,SME 51-250

Type of Partnership Considered

License agreement
Commercial agreement with technical assistance

Attachments

Profile Status: Published

Technology Offer

Next generation wind turbine

Summary

German R&D company specialised in the design of wind turbine generators (WTG) is offering an innovative technology for the development of the next generation wind turbine. This new concept of the wind turbine has a competitive cost structure, reduced noise emissions and, in comparison to existing technologies, its energy generation is much more constant. The company looks for partners for financial, license and technical cooperation agreement.

Creation Date	15 March 2017
Last Update	21 March 2017
Expiration Date	20 March 2018
Reference	TODE20170314001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/0df85f7b-b8a8-46f6-a5d7-5d0b5ccffd0f

Details

Description

An independent German R&D company specialised in the renewable energy technology area has designed a wind turbine of the next generation. The concept is based on proven technology and, in comparison to technologies existing on the market, the new wind turbine generator ensures a much more constant energy generation by pushing the power production to the lower wind area. Moreover, it has a competitive cost structure due to reduced structural loading, reduced noise emissions and it is designed for worldwide application.

The R&D company has a team of 20 engineers that have long-term experience in the wind area. A major part of this team has developed, among others, the initial wind turbine for the second largest wind turbine manufacturer in the world, with 18.000 units installed worldwide.

The company is now looking for financial, license and technical cooperation agreement. Partners active in the area of renewable energies, for example project developers for wind farms or industrial players already selling components to the Original Equipment Manufacturers (OEMs) of wind energy turbines are sought.

Advantages and Innovations

The wind turbine generator under development is the next generation turbine that:
• ensures a much more constant energy generation than all other WTGs on the market by pushing the power production to the lower wind area,
• reaches capacity factors up to 50%,
• is designed to support local content requirements,

• is able to deal with weak grid conditions and fulfils global grid codes,
• electrical system is designed for worldwide application (50Hz and 60Hz market)
• has a competitive cost structure because of reduced structural loading,
• can be installed in low wind areas,
• has reduced noise emissions,
• is addressing a decentralised power production strategy and avoids expensive storage solutions.

Stage of Development

Concept stage

Comments Regarding Stage of Development

The concept is based on proven technology. Detailed design has already been started.

IPR Status

Patent(s) applied for but not yet granted

Profile Origin

Private (in-house) research

Keywords

Technology

02009026	Energy supply system
04005008	Wind energy
10004009	Marine Environment

Market

06002003	Power grid and distribution
06003003	Wind energy
06003004	Marine energy
06010003	Energy for Industry

NACE

D.35.1.1	Production of electricity
M.71.1.2	Engineering activities and related technical consultancy

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Open for EOI : Yes

Dissemination

Send to Sector Group

Intelligent Energy

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

0

Turnover

1 - 10M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English
German
French
Spanish

Client Country

Germany

Partner Sought

Type and Role of Partner Sought

The German R&D company is looking for partners that are planning to invest in wind turbine technology with the target to set up production facilities in “new wind markets” to fulfil local

content requirements. Any country that is intending to move the domestic energy production from conventional resources to renewables and is aiming to strengthen the domestic economy could generally be a target market for the project.

The potential partner could either be a project developer for wind farms or an industrial player already selling components to the WTG OEMs. In this case a financial agreement or a technical cooperation agreement is sought.

The R&D company is also interested in partnership with investors wanting to invest in renewable energies. Target of this project is to enhance the product development.

The development allows a maximized value creation in the applicable target markets. The requirement regarding domestic content shall be fulfilled by complete transfer of WTG documentation, access to sub system suppliers, installation and commissioning processes, etc. to the potential local partners. In addition, the R&Ds scope includes development of strategies for local manufacturing, sourcing and project development.

The agreement could either cover an engineering service package or could be a license agreement for the use of the R&D technology.

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
Financial agreement
Technical cooperation agreement

Attachments

Profile Status: Published

Technology Offer

Portuguese technology provider for transport sector is looking for partners for services and research cooperation agreements

Summary

Portuguese SME specialized in research and development for the transport industry, incorporating artificial intelligence, is offering services agreement and is also looking for partners interested in research cooperation agreements.

Creation Date	04 March 2016
Last Update	26 February 2018
Expiration Date	09 March 2018
Reference	TOPT20160304001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/f9b1ac70-1e89-44b3-a2ff-3280e70bc347

Details

Description

Portuguese start-up dedicated to research and development (R&D) for the transport industry is offering services agreement as technology provider to transport companies that need to manage efficiently their transport fleets and agents that need to control a considerable number of transport fleets.
The company is specialized in the following areas: internet of things (IoT), research and development, artificial intelligence, data mining, smart cities, big data, smart vehicles, green transportation, vehicle communication, 5th generation wireless systems (5G) transport industry, preventive maintenance, mobile ticketing.
At this stage the company has developed an information technology (IT) solution that is design to improve the efficiency of business fleets (fuel efficiency, compliance with environmental regulations and reduction of greenhouse gas emissions, vehicle off-road time and maintenance costs). The company is responsible for R&D on engine control unit interpretation, vehicle protocols, communication protocols and physical interfaces, as well as big data analysis in real-time, machine-learning and artificial intelligence algorithms for preventive maintenance, fuel optimization and predicting critical events.
The company also has developed a solution based on route search algorithm and integrated ticketing through mobile solutions that includes:
- a mobile payment service to unify public transport options under one umbrella;
- research and development performed for a standardization of ticket purchase & validation among transport operators, leading to the introduction of a global e-wallet for transports.
The project provides transport operators with a big data analysis platform, and a dynamic route

management system based on real-time data and user feedback.

The company is also interested in several research areas compatible with their expertise, namely:
- Smart vehicles: vehicle-to-everything (V2X) communication and the impacts of 5G and its related changes on the automotive industry;
- Green vehicles: research on the field of conditions affecting battery consumption on electric vehicles.
- Open data for smart cities: standards and protocols for the creation of open data. Participation on the open agile smart cities initiative. In this area, the company has been awarded and received funding for several future internet (FIWARE) related projects;
- Data mining and artificial intelligence: analysis of real-time data from vehicle sensors and external sensors applied to fleet management, smart and dynamic route planning and energy efficiency solutions.

As part of their growth strategy to develop new disruptive solutions and products, this company is also interested in the Horizon 2020 calls related with IoT, information and communication technologies (ICT) and transport areas and is looking for research partners interested in research cooperation agreement.

Advantages and Innovations

The Portuguese company has developed solutions to the transport sector that incorporate artificial intelligence which is the main comparative advantage when comparing to competition that is mainly focused in providing usual software programs to manage transport fleets.

This company has experience in 7th Framework Program and Horizon 2020 and is strategically looking for new partners abroad mainly within research and development community to network and prepare projects to submit to Horizon 2020 in their main research areas.

Stage of Development

Already on the market

IPR Status

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

Profile Origin

Other

Keywords

Technology

01003003	Artificial Intelligence (AI)
01003010	Databases, Database Management, Data Mining
01003025	Internet of Things
01004003	Applications for Transport and Logistics

Market

01004008	Other data communications
02007016	Artificial intelligence related software

06011	Energy for Transport
09001002	Trucking

NACE

J.62.0.1	Computer programming activities

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Open for EOI : Yes

Dissemination

Send to Sector Group

Automotive, Transport and Logistics

Client

Type and Size of Organisation Behind the Profile

Industry SME 11-49

Year Established

2012

Turnover

<1M

Already Engaged in Trans-National Cooperation

No.

Languages Spoken

English
Portuguese

Client Country

Portugal

Partner Sought

Type and Role of Partner Sought

The company is offering services agreements to companies acting in the transport field.

The company is also looking for research institutes with skills in research & development of V2X solutions and IoT for the transport industry that have interest in the following Horizon 2020 calls: https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2061-art-07-2017.html (Topic Identifier: ART-07-2017)

https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2063-art-01-2017.html (Topic Identifier: ART-01-2017)

https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/9053-s2r-cfm-ip3-02-2016.html (Topic Identifier: S2R-CFM-IP3-02-2016)

https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2221-iot-03-2017.html (Topic Identifier: ART-03-2017)

https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5084-ict-35-2016.html (Topic Identifier: ICT-35-2016)

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

Services agreement
Research cooperation agreement

Attachments

Profile Status: Published

Technology Offer

Technology programme for additive manufacturing (3D printing) of polymers, metals and ceramics

Summary

A Dutch research institute has founded a knowledge centre that offers a technology programme for Additive Manufacturing (AM, 3D printing) of technical parts in metal, polymer and ceramics. The technology is capable of predicting and achieving the right microstructure and homogeneous properties in the final material, and works directly from Computer Aided Design (CAD) data. The institute is looking industry partners for commercial agreements with technical assistance.

Creation Date	29 August 2016
Last Update	29 August 2017
Expiration Date	04 March 2018
Reference	TONL20160809001
Public Link	https://een.ec.europa.eu/tools/services/PRO/Profile/Detail/cf0e1619-d4da-4b8b-a0de-4d3b74267bd3

Details

Description

This Dutch research institute has a long history in scientific and technological research and development in several fields of expertise. Now they have joined forces with one of the leading Dutch technnical universities, offering a program that builds on the existing expertise of the university and the institute in additive manufacturing.

3D printing is complex because the microstructure of the material needs to be well understood in order to guarantee the homogeneous mechanical properties and structure of parts. Certification of 3D printed parts is therefore an additional developing theme.

The offered technology program will develop new multi-material/multi-technology additive manufacturing concepts and the integration of these technologies in mass-customization manufacturing chains. It brings additive manufacturing from prototyping to industrialization, with emphasis on cost-effectiveness while maintaining flexibility, stability and reliability in the manufacturing system.
• high-speed / continuous AM technology (speed capabilities and single pass deposition)
• in-line metrology technologies

What partners gain by joining this technology program:
• an efficient method to determine optimum processing parameters;
• a database with design values;
• additive manufacturing design guide lines, methods and tools;

• a cost model for additive manufacturing products;
• knowledge of post-processing for (metal) additive manufacturing: powder removal, heat treatments, surface finishing;
• material qualification and process certification methodologies for additive manufacturing;
• optimized technology demonstrators;
• insight in opportunities, technical and economical;

Joining this program helps to:
• prevent fragmentation of research and achieve exchange of knowledge between industry, academic and applied knowledge organizations;
• prevent long and expensive learning curve and high scrap rate;
• make reproducible parts with reliable material properties;
• make use of well accepted certification methods.

It is anticipated that within four years, 25 PhD student research assistants will be undertaking research and that more than 50 full-time professionals will be involved in the centre. Soon 7 PhD student research assistants will begin work and at the institute around 30 people are already working in this field.

The centre aims to collaborate intensively in R&D with industry, the goal being to have dozens of industrial partners participating in research programs in the coming years. The program targets industrial partners with high-tech, 3D printed electronics, food/pharma and medical-related markets with spin-off to other markets that require personalized, customized, on-demand manufacturing, for cooperation within the frame of commercial agreements with technical assistance.

Advantages and Innovations

Compared to traditional manufacturing techniques, additive manufacturing:
- opens opportunities to create parts with complex structures, without additional or dedicated tooling directly from 3D CAD data.
- even shapes that cannot be created with traditional machining processes can be attained.
- high design freedom, desired to reduce assembly steps and to achieve lightweight constructions, is realisable.
- hollow parts that currently need to be machined from one piece for the mechanical properties, can be manufactured with less waste and – in the future- shorter time.
- prototyping and low-volume markets (e.g. medical and space related applications) can be servedm, because for these markets one-offs or low quantities are required.

Compared to other technology partners, this institute holds a specific technology position and also a special knowledge position. And it has an explicit objective to transfer this knowledge to SMEs, which makes them very accessible.

Stage of Development

Available for demonstration

IPR Status

Secret Know-how

Profile Origin

National or Regional R&D programme

Keywords

Technology

02001001	3D printing
02007003	Ceramic Materials and Powders
02007010	Metals and Alloys
02007011	Non-ferrous Metals
02007014	Plastics, Polymers

Market

05004004	Medical instruments
05004006	Surgical instrumentation and equipment
06001004	Equipment and instrumentation
07004001	Clothing, shoes and accessories (including jewellery)
09001005	Motor vehicles, transportation equipment and parts

NACE

C.22.2.9	Manufacture of other plastic products
C.23.4.4	Manufacture of other technical ceramic products
C.25.9.9	Manufacture of other fabricated metal products n.e.c.
M.72.1.9	Other research and experimental development on natural sciences and engineering

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Open for EOI : Yes

Dissemination

Send to Sector Group

Materials

Client

Type and Size of Organisation Behind the Profile

R&D Institution

Year Established

1932

Turnover

20 - 50M

Already Engaged in Trans-National Cooperation

Yes

Languages Spoken

English

Client Country

Netherlands

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: industry
- Specific area of activity of the partner: Mechanical design of high tech systems and components based on technical metal in e.g. sectors like: • Medical and dental • Watch and jewellery • (Petro)chemical • Aeronautics • Automotive • Electronics
- Task to be performed: Implementation of the proposed technology in the frame of a commercial agreement with technical assistance

Type and Size of Partner Sought

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

Type of Partnership Considered

Commercial agreement with technical assistance

Attachments