

Japanese patented technology for fundamental mechanism of peristaltic pumps

Summary

Profile type	Company's country	POD reference
Technology offer	Japan	TOJP20220909008
Profile status	Type of partnership	Targeted countries
PUBLISHED	Commercial agreement with technical assistance	• World
Contact Person	Term of validity	Last update
Alessandro PERNA	9 Sep 2022 8 Sep 2024	4 Sep 2023

General Information

Short summary

This Japanese firm is looking for partners in the EU interested in a patent related to the mechanism of peristaltic pumps.

The offered technology greatly reduces the fatigue of these pumps, increasing the longevity and reliability in applications such as medical devices and clinical usage, while also being usable in emergency care.

The technology is offered under a commercial agency agreement with technical assistance, a license agreement, and a technical cooperation agreement.

Full description

A Japanese firm is seeking companies in the EU who are interested in a patented technology. The offered technology is related to the fundamental mechanism of peristaltic pumps. The technology is applicable wide range of liquid handling which needs high cleanness and no contamination.

The main feature of peristaltic pumps is their non-contact to the liquid handled by the pump. However, the tube through which the liquid moves can get fatigued due to the mechanical pressing force. As a result, the flow rate of the pumped liquid changes in time and the lifespan of the pump is limited by the mechanical strength of the tube.

The patented pump has no such weakness in its pumping mechanism, assuring a constant flow rate and long lifespan. The technology and the data that the technology is based on engineering tests of the actual pumping mechanism. Possible applications are medical infusion pumps, colour mixing pumps and biochemical processing tools that require liquid handling without any contamination. The technology was developed to improve conventional medical infusion pumps.

Target partners are manufacturing companies looking for new technology to implement within their products. Therefore, the end-goal is for the technology to be transferred to manufacturers who will benefit from the patent. The technology transfer is offered under the terms of a commercial agency agreement with technical assistance, a license agreement, and a technical cooperation agreement. The Japanese company is ready to provide technical assistance and proactively work together with the EU partner.

Advantages and innovations

The pump technology offered by the Japanese company is safer and more reliable than conventional methods being used today. This is achieved by reducing the fatigue on the pumps which greatly decreases the lifespan of conventional products on the market. The advantages of using this technology are therefore quite significant.

For example, it reduces the potential risk of inaccurate medicine injection occurring because of variations in the liquids' flow rate. A decrease in fatigue also increases the longevity of the pumps, allowing the same pumps to be used for a longer time at lower risk.

Finally, the pump also has the mechanical capacity to operate on tubes of various diameters. This is made possible due to the new pump mechanics which are designed to have this capacity. Therefore, it is possible to use infusion bag products supplied by different pharmaceutical companies. Since the pump accepts various infusion products, unlike most conventional products, it can be used on emergency care.

The patent has been registered in France, Germany and the United Kingdom.

Technical specification or expertise sought

Stage of development

Lab tested

IPR Status

IPR granted

Sustainable Development goals

• **Not relevant**

Partner Sought

Expected role of the partner

The Japanese company is looking for an industrial or technological partner of any type and size interested to license the technology. Ideally the partner should have the necessary know-how to benefit from the usage of this technology. The main application of the products produced using the technology will be medical, bio, pharmaceutical and scientific equipment.

The patent can be licensed out to potential EU partners after which the partners take care of the technology application and possible commercialisation. However, closer forms of cooperation are also welcomed for example by closely cooperating in the development of products, and by providing additional technical assistance.

Type of partnership

Commercial agreement with technical assistance

Type and size of the partner

- **SME <=10**
- **Big company**
- **University**
- **SME 11-49**
- **SME 50 - 249**
- **R&D Institution**

Dissemination

Technology keywords

- **03002 - Process Plant Engineering**
- **03003 - Apparatus Engineering**
- **06001012 - Medical Research**
- **06001013 - Medical Technology / Biomedical Engineering**

Targeted countries

- **World**

Market keywords

- **05004001 - Electromedical and medical equipment**
- **05004004 - Medical instruments**

Sector groups involved

Media

PDF documents



[Abstract of the Patented Technology.pdf](#)

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