Textile Heart Valve Prosthesis

• Innovative prosthetic device could prevent the drawbacks of the currently implanted transcatheter heart valves.
• Techology could be adapted to non critical patients, opening new horizons for percutaneous implantation.

KEYWORDS

Heart valve
Transcatheter
Minimally invasive

TECHNOLOGY

- Alternative to Biological Tissue
- Textile valve composed of polyester fibers
- Discontinuous fiber construction
- Adapted to compression for transcatheter insertion

Prototype

APPLICATIONS

- Transcatheter aortic/ mitral heart valve replacement
- Percutaneous valvular surgery

INNOVATION ADVANTAGES

- Improved reliability and early detectable failure mode: no risk of catastrophic failure
- Less sensible to the stress imposed by both the radial compression at time of catheter insertion, and later by working conditions
- Low thickness (less than 100 µm) adapted to reduced catheter size
- Textile valve can be manufactured at very low cost and does not require any special storage environment

DEVELOPMENT STATUS

- Fatigue tests on-going: already on 200 Mio cycles at 15Hz
- *in vivo* tests: implantation batch of 15 valves in sheep model ongoing, sacrified at 6 month.

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