

## New junction technique VTTJ (Vacuum Tight Threaded Junction):

- Permits to make **low cost** metallic junctions compatible with aggressive environments (high temperature, flames, high thermal fluxes, high vacuum etc.): **a good alternative to welding!**
- Applicable also to join non weldable materials and for **heterogeneous** joints (e.g. between steel and copper)
- Tested up to 500 bar internal pressure and up to 200°C, with **excellent** leak tightness
- Adopted for many scientific applications in Nuclear Fusion **research**; now being licensed to **industry**

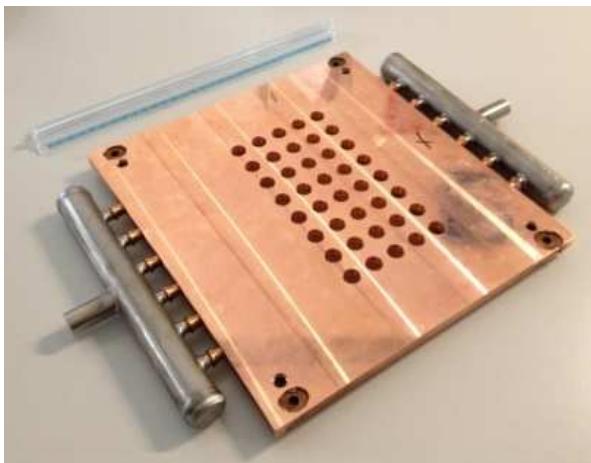
Possible **applications**: junctions on heat exchangers, hydraulic plants, boilers etc. in manufacturing, chemical, food, pharmaceuticals, oil industry etc.

Main advantages with respect to welding or brazing:

- **Easy** construction
- **Low** cost (can be made using a standard manufacturing equipment)
- High **reliability** (passed several tests in critical conditions)

VTTJ is an **international patent** of Consorzio RFX, available at <http://patentscope.wipo.int/search/en/WO2013182962>

For more information: [piero.agostinetti@igi.cnr.it](mailto:piero.agostinetti@igi.cnr.it)  
Tel. +39 049 8295087



*Example of application for high heat flux components in the ITER reactor  
(more information at [www.iter.org](http://www.iter.org))*