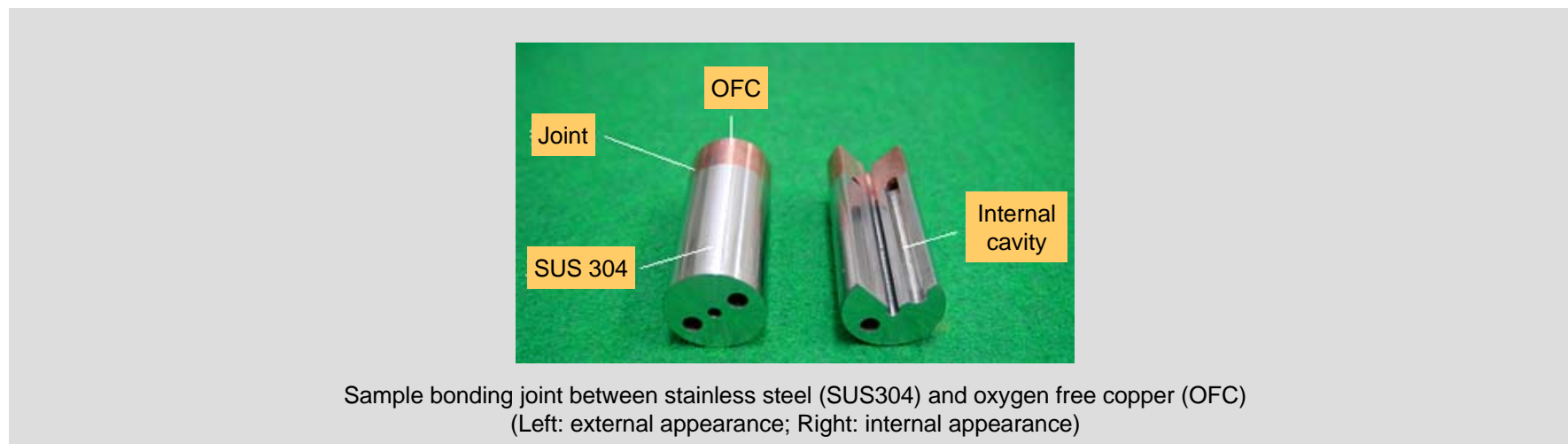


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## Development of high precision & energy conserving pulsed electric current bonding technology Reducing joint material deformation by 40% and bonding time by half



Sample bonding joint between stainless steel (SUS304) and oxygen free copper (OFC)  
(Left: external appearance; Right: internal appearance)

Hitachi, Ltd. has developed technology to increase the precision and conserve energy in pulsed electric current bonding (PECB), a process used in high precision metal bonding. Compared to conventional technology, material deformation in the joint was reduced by 40%(\*1) and bonding time was reduced to half.

PECB process involves passing a current through the materials to be joined, and uses the electric resistance heat to bond the joint. As is suitable for precision bonding of metallic components of complex structures (e.g. in engine components and hydraulic equipment), PECB is receiving attention as a bonding process which can accommodate various demands.

Details of this technology will be presented at the autumn national convention of the Japan Welding Society to be held from 10<sup>th</sup> to 12<sup>th</sup> September 2008, at the Kitakyushu International Conference Center in Kitakyushu-shi, Fukuoka, Japan.