Title (14 pt, Times New Roman Using Capitalization Only on First Letter of Major Words, bold and Centered)

(2 blank lines)

First author's name and last name[a*], Second author[b], andThird author[c]
(12 pt, Times New Roman and Centered)
(1 blank line)
[a]First author's affiliation, City, Country
[b]Second author's affiliation, City, Country
[c]Third author's affiliation, City, Country
(12 pt, Times New Roman, Italic and Centered)
(1 blank line)
**Corresponding author: e-mail address*
(12 pt, Times New Roman, Italic and Centered)
(1 blank line)

Recent improvements in the current density of HTS 2G coated conductors (CC) and their superior mechanical properties have driven it to high field HTS magnets and brightened the prospects of higher field fusion machines. The availability in long length CC tapes remains one of the concerns that should be considered in large-scale applications such as magnets and coils for fusion. For these applications, high performance and reliable CC joints should be established for the safe and effective operation of the superconducting devices. Having an acceptable low contact joint resistance without degradation of critical current, I_c and a good adhesion will be the important characteristics of a joint method. Since various types of CC joints like lap-, butt- and bridge-structures can be considered in the fusion application, understanding the characteristics of various CC joints including mechanical controlled soldering is necessary. As a means to produce long-length high temperature superconducting wires, a practical joining technique of 2G coated conductor (CC) tapes based on an ultrasonic welding (UW) was recently developed by ANU [1, 2]. In this study, in order to characterize the joint properties of the UW CC joints fabricated with various types of joint structures, the joint resistivity and the electromechanical properties were examined at 77 K, respectively. The electromechanical testing was performed under both loading conditions of uniaxial tension and double bending at 77 K and self-field, respectively. The irreversible tension load limit and the minimum bending diameter against the retained I_c and joint resistance R_j degradation for various CC joints were determined, respectively.

** This work was supported by a grant from National Research Foundation of Korea (NRF-2017-001109), funded by the Ministry of Science, ICT and Future Planning (MSIP), Republic of Korea.*

[1] H. S. Shin, A. Nisay, and M. J. Dedicatoria, "Joining of REBCO coated conductor tapes using ultrasonic welding method", *IEEE Trans. Appl. Supercond*. vol. 25, no. 3, p. 6602205 (2015).

[2] H. S. Shin, J. M Kim, and M. J. Dedicatoria, "Pursuing low joint resistivity in Cu-stabilized $REBa_2Cu_3O_{7-\delta}$ coated conductor tapes by the ultrasonic weld-solder hybrid method", *Supercond. Sci. Technol*., vol. 29, p 015005, (2015).