

### Campione B: dati calcolati e sperimentali

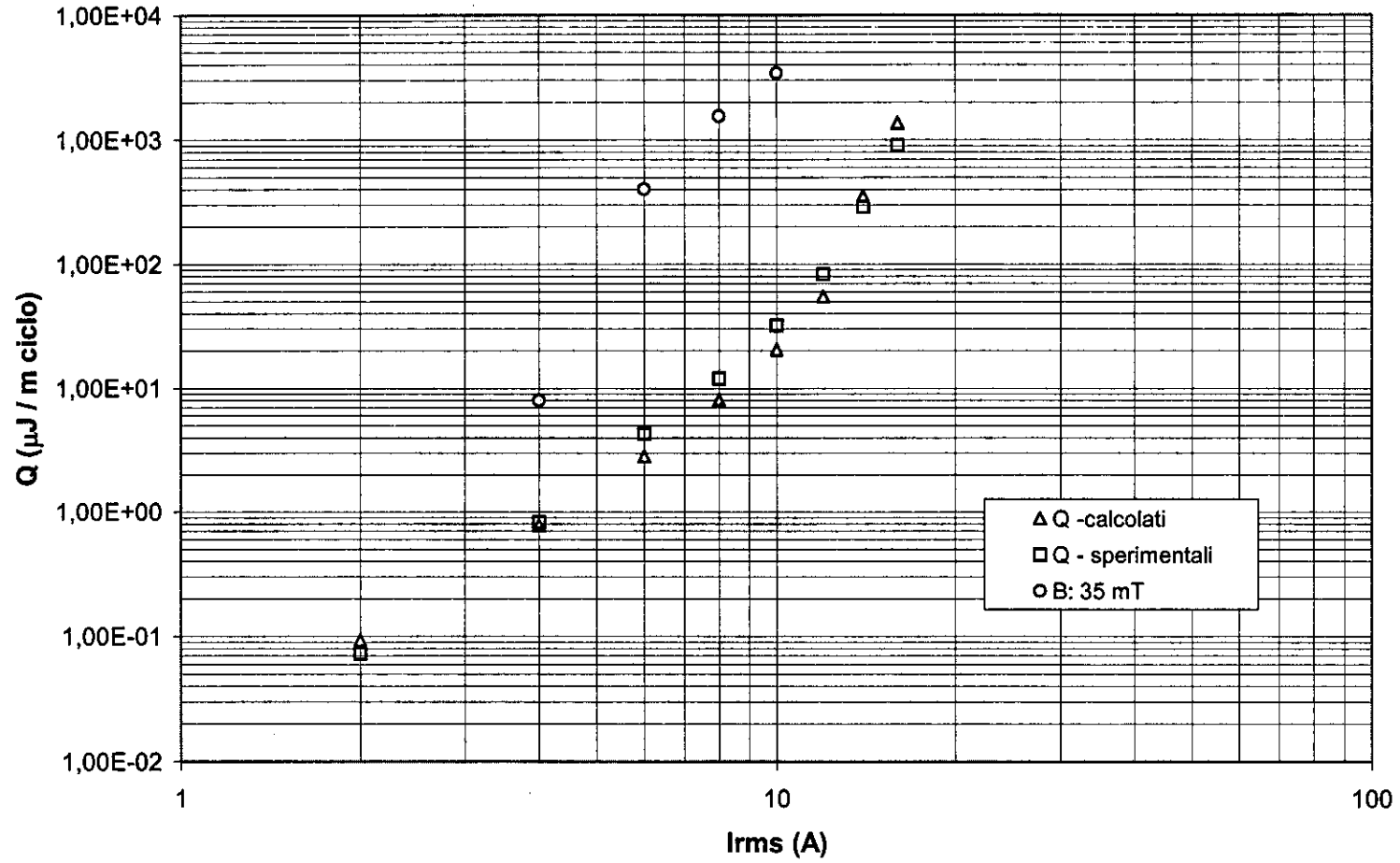
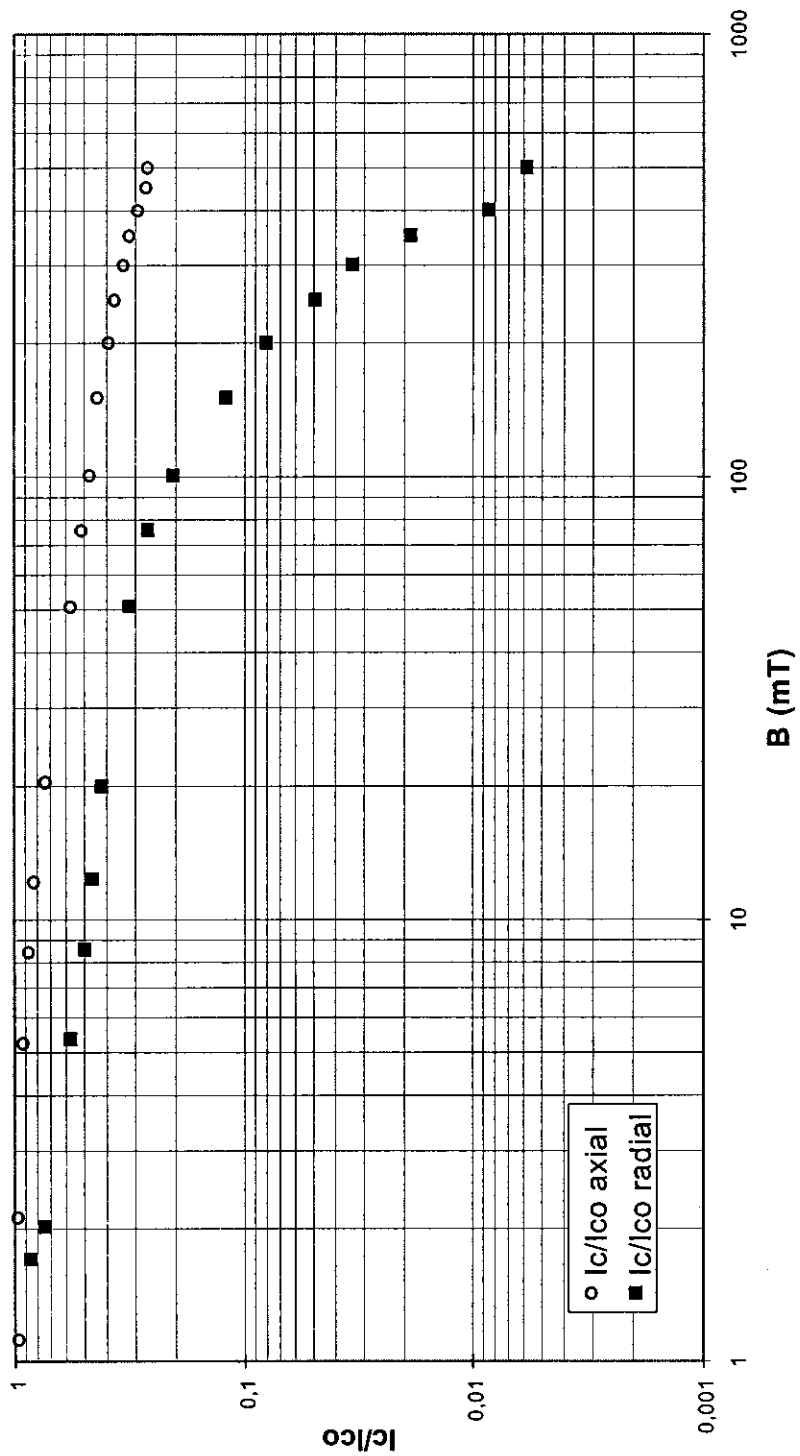


Figura.5.9



**Figura 5.10 – Relazione tra la corrente critica e il campo magnetico.**

**$I_{c0}$ : corrente critica con campo esterno nullo,**

**$I_c$ : corrente critica corrispondente ad un campo esterno applicato non nullo.**

### Relazione tra n e il campo magnetico

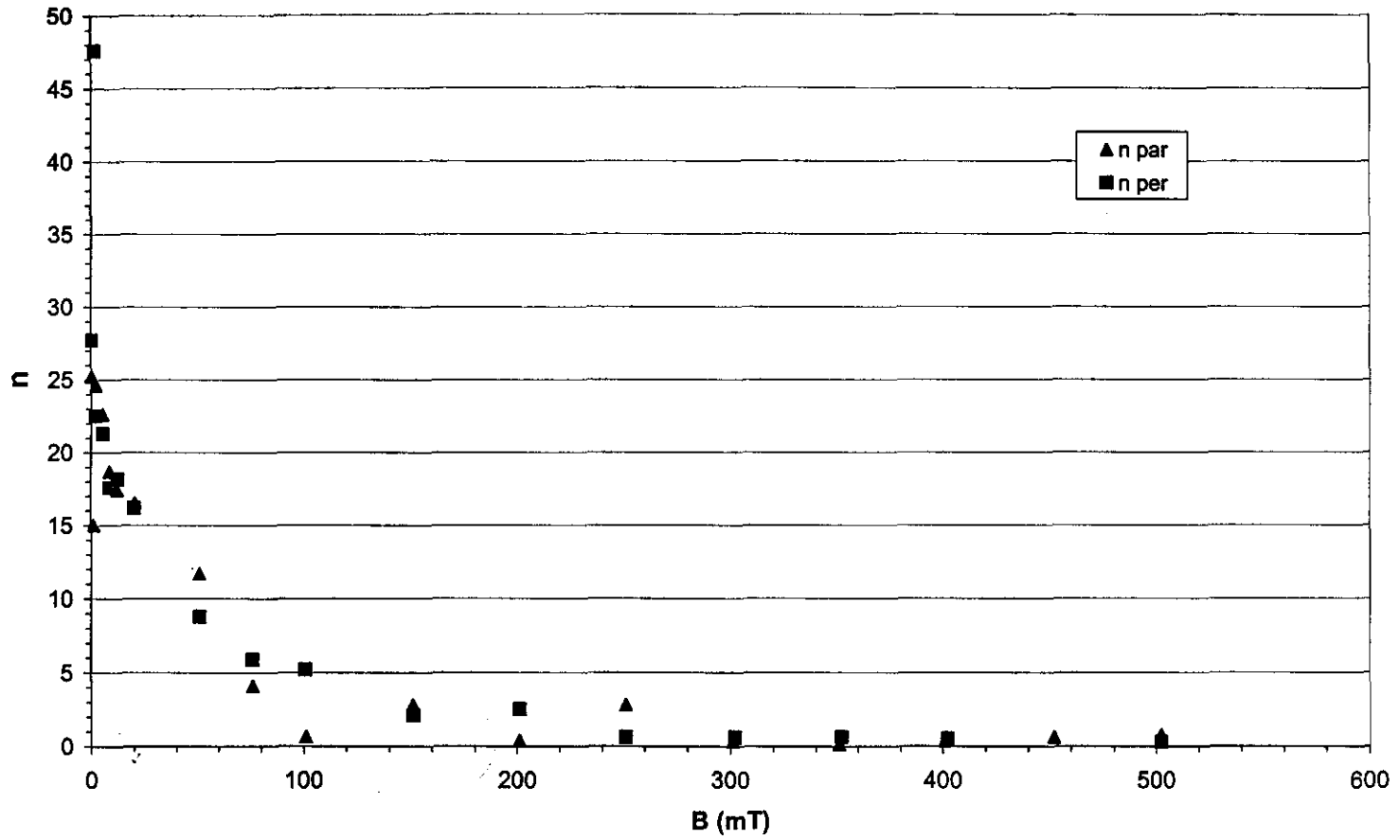


Figura 5.11

Corrente critica in funzione del raggio di curvatura per due nastri A e B (2R=100  
corrisponde al nastro non piegato)

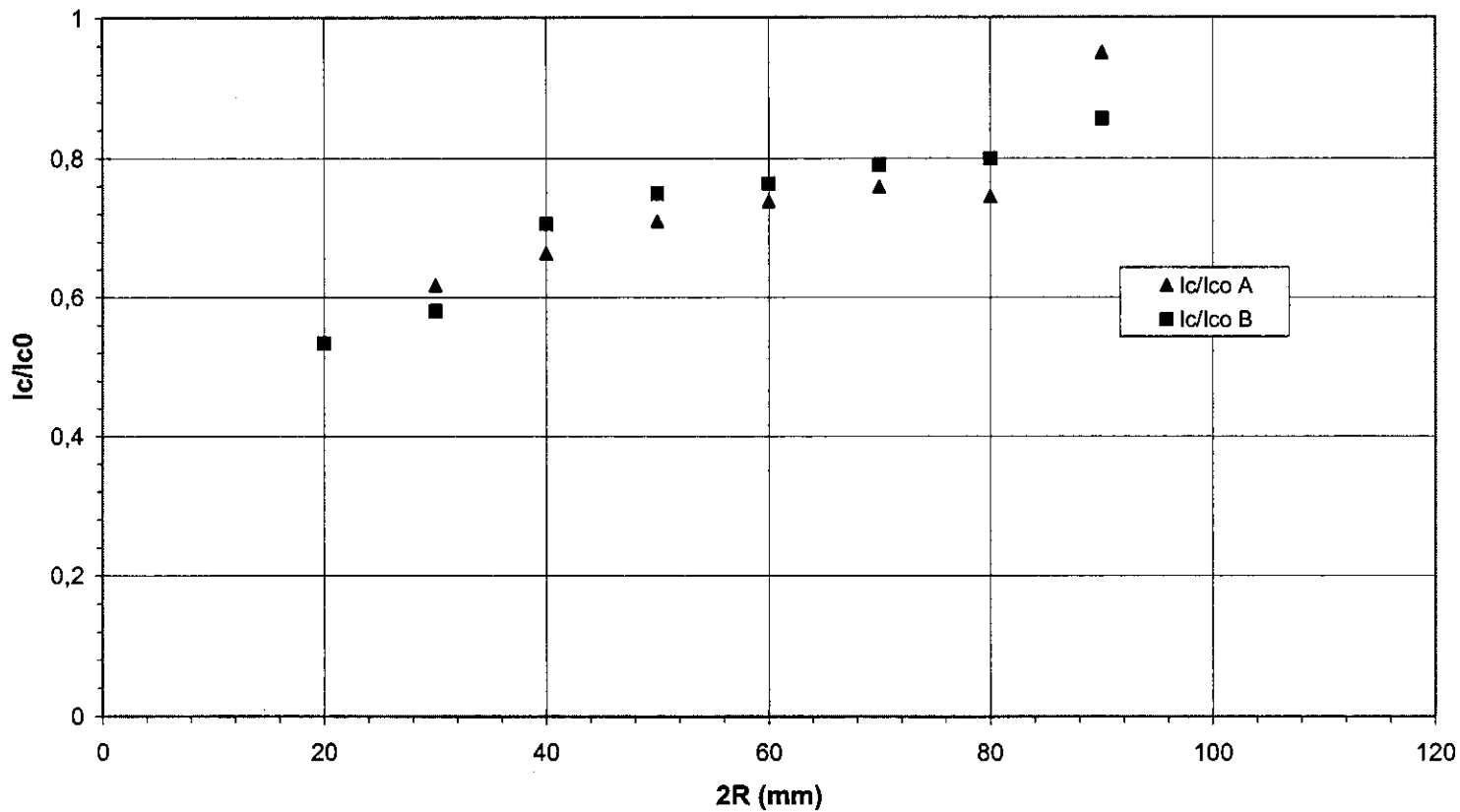


Figura 5.12

## Bibliografia:

- [1] Günter Ries, Martino Leghissa, Jürgen Rieger, Jan Wiezorek, Marjn Oomen *High-Tc Superconductors and AC-Loss in Electrotechnical Devices*, published on Physica C 310 (1998).
- [2] L. Bigoni, F. Curcio, L. Martini, F. Miraglia, V. Ottoboni, S. Zannella *Fabrication of Bi-2223/Ag Tapes: Influence of Selected Process Parameters on the Electrical and Magnetic Properties*, Proc. IV Euro Ceramics, Vol. 7 pp. 183-188, 1995.
- [3] G. Grasso, A. Jeremie, R. Fluckiger, *Preparation and Superconducting Properties of Silver-Sheathed Bi-2223 Tapes*, Supercond. Sci. Technol. Vol. 8 pp. 827-837, 1995
- [4] 1. Terry P. Orlando, Kevin A. Delin, *Foundations of Applied Superconductivity*, Addison-Wesley Publishing Company, Inc. 1991
- [5] P.W. Anderson, *Theory of flux creep in hard superconductors*. Phys. Rev. Lett., Vol. 9, pp.309-311, 1962
- [6] A. V. Gurevich, R. G. Mints, A. L. Rakhmanov, *The Physics of Composite Superconductors*, Begell House USA 1997
- [7] L. Bigoni et al., *Development of Bi-2223/Ag-Alloy Tapes*, proc. Applied Superconductivity Conference – Palm Desert, California – USA Sept. 1998
- [8] L. Bigoni, E. Cereda, F. Curcio, L. Martini, V. Ottoboni, P. La Cascia, *Electrical, magnetic and AC losses properties of Bi-2223/Ag(alloy) tapes subjected to bending strain*, proc. EUCAS 99 September 1999, Barcellona – Spain
- [9] A. B. Sneary, C. M. Friend, P. Richens, H. Jones, D. P. Hampshire, *Development of High Temperature Superconducting Coil Using Bi-2223/Ag Tapes*, proc. Applied Superconductivity Conference, Palm Desert, California, USA Sept. 1998
- [10] V. Sokolovsky, V. Meerovich, S. Goren, G. Jung, *Analytical Approach to AC Loss Calculation in High-Tc Superconductors*, Physica C (in press) June 1999
- [11] W. T. Norris J. Phys. D 4 (1971) p.1358
- [12] J. J. Rabbers, B. ten Haken, H. H. J. Ten Kate, *Transport Current Loss of BSCCO/Ag tape in Different Orientations of External Alternating Magnetic Field*, proc. Applied Superconductivity Conference, Palm Desert, California, USA Sept. 1998
- [13] T. Yazawa, J. J. Rabbers, B. ten Haken, H. H. J. Ten Kate, Y. Yamada, *Numerical calculation of current distribution in HTS tapes with finite thickness in self field and external field*, published on Physica C 310 (1998).
- [14] O. A. Shevchenko, J. J. Rabbers, A. Godeke, B. ten Haken, H. H. J. Ten Kate, *AC loss in high superconducting coil*, published on Physica C 310 (1998).

- [15] Hermann A. Haus, James R. Melcher, *Electromagnetic Fields and Energy*, Prentice-Hall Inc. USA 1989
- [16] *Handbook of APPLIED SUPERCONDUCTIVITY* Vol. I, IOP Publishing Ltd 1998
- [17] SR 830 DSP LOCK-IN AMPLIFIER, operation manual and programming references
- [18] M. Ciszek, A. M. Campbell, A. Glowaki, *The effect of potential contact position on AC loss measurements in superconducting BSSCO tapes*, Physica C, Vol. 233, 1994, p.203
- [19] J. J. Rabbers, B. ten Haken, H. H. J. Ten Kate, Measuring transport current loss of BSCCO/AG tapes exposed to external AC magnetic field, published on Physica C 310 (1998).
- [20] L. Martini, *High Critical Current Densities in Silver Sheathed Bi-2223 Tapes*, Nova Science Publisher, New York, ISBN 1-56072-419-6