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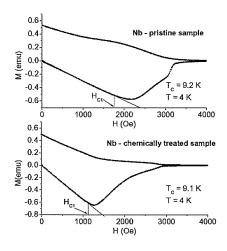
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- (54) A method of qualifying niobium and/or other super conducting materials for reliable fabrication of superconducting radio frequency (SCRF) cavities
- (57) A method of qualifying Niobium and/or other super conducting materials for the reliable fabrication of SCRF cavities, which will invariably deliver high accelerating fields comprising:

identification of the best superconducting lower critical field (H_{C1}) based on subjecting a sample of the superconducting material selectively to mechanical stress, annealing at various temperatures, various chemical treatments, post-chemical treatment baking/annealing; and identification of the best possible thermal conductivity of the material at said best superconducting lower critical field (H_{C1}) to thereby qualify the superconducting material for the reliable fabrication of SCRF cavities adapted to deliver high accelerating fields.



(Figure 1)