

Fabrications of Buffer Layers on Ni and NiCr Tapes for Long Coated Conductors.

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We'll show the comparisons of the film qualities, the speeds of fabrications, and reproducibility's of the $\text{CeO}_2/\text{YSZ}/\text{CeO}_2$ buffer layers on Ni and NiCr tapes for various deposition methods for coated conductors of several meter length. The thermal evaporation is more versatile and reproducible than e-beam evaporation for the growth of CeO_2 films on substrate tapes. The sputtering is more versatile and faster than e-beam evaporation for the growth of YSZ films on the tapes. Each method requires its own conditions for the proper growths of films, the details of which will be presented. The growth and the quality of a new type of buffer layer, $\text{SrTiO}_3/\text{BaO}$, on a Ni tape were investigated. The comparison of textures of Ni and NiCr tapes will be given

keywords : Buffer layer, coated conductor, various methods