

Recent Developments in Superconductor Cabling Technology. J.M. ROYET and R.M. SCANLAN Lawrence Berkeley Laboratory, Berkeley, CA, USA.

Nearly all designs for accelerator magnets employ a flat, compacted cable which is referred to as a Rutherford cable. Design studies at LBL have identified the need for cables with more strands in order to produce an optimum design. In order to provide magnet designers with increased flexibility in the design of magnets, we have been pursuing a development effort aimed at pushing beyond the present limits of Rutherford-type cables. The parameters being studied include size and number of strands, keystone angle and degree of compaction. We have recently upgraded our experimental cabling machine from 48 to 60 strand capability, and we will report on our experiments to fabricate Rutherford-type cables with up to 60 strands, as well as experiments to increase the degree of compaction of these cables. We will also discuss some of the possible new applications of such wide cables.

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