

Wide Variety of Techniques for Field Measurements of Snow Strength

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ABSTRACT

During the winter of 2018 field experiments were conducted to assess the mechanical properties of virgin, groomed and compacted snow. These strength measurement techniques assessed the bearing and shear capacity of the snow, or a combination thereof. Many of the methods were adapted from those used in soil and pavement assessments and could be related to California Bearing Ratio, and others were techniques specifically designed for snow characterization (Rammsonde, Russian snow penetrometer, CTI penetrometer, Yamaha drop cone). The results illustrate typical values and ranges for the strength of different types of snow surfaces, and the applicability or effectiveness of the different tests to specific snow conditions.

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