Pneumatic Radial Loading To Ease Preloading – An Innovative Technique

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Abstract— Soft ground improvement gained prominence all over the world in view of ever growing engineering activities for various purposes. In view of serious problems during and after construction in these deposits, vertical drains method using preloading is being frequently applied to improve these soil beds. However, in view of the difficulties associated with this technique, an alternative vacuum preloading technique was developed. But vacuum preloading is also limited to the available atmospheric pressure with inevitable technical difficulties. The present paper discusses an innovative technique of applying radial pneumatic pressure with the help of inflatable balloons/tubes. The drainage is facilitated along the surface of inflatable tubes by providing fabric strips/the traditional strip drains. The laboratory experimentation in test tank indicated that this technique has the potential for practical applications.

***Index Terms*— Pneumatic Radial Loading, Soft clays, Inflating Baloons, Strip drains.**

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