

VERTICAL TURBINE PUMP BASE STOOL MODAL ANALYSIS AND MODEL MODIFICATION

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ABSTRACT

The modal analysis of vertical turbine pump base stool is carried out using finite element analysis. Total six modes of vibration are found for this analysis. Pump operational frequency is 120 Hz which is very close to sixth natural frequency of base stool cylindrical shell. At the end of paper some structural modifications have suggested by providing longitudinal and circumferential ribs around the cylindrical base stool cylindrical shell to move natural frequency of base stool cylindrical shell away from pump operational frequency.

KEYWORDS: Base Stool Cylindrical Shell, Circumferential and Longitudinal Ribs, VTP (Vertical Turbine Pump)