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**ABSTRACT**

Vibration creates excessive stresses in machine parts. It leads to loosening of assembled parts and may also lead to partial or complete failure of machine systems. Therefore in order to reduce excessive vibration to protect the system, shock absorbers are used. But due to bad selection of shock absorber this may not be achieved in practice. So it is necessary to select appropriate shock absorbing unit based on application. To govern such phenomena *Shock Absorber Testing Machine* is used. This would help to check whether the designed shock absorber is performing up to its potential in practice. It would also help user to use it for required application.

This project is helpful to find the transmissibility ratio of the shock absorber at various frequency ratios in order to check whether the selected shock absorber is suitable for required application.

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**SYMBOLS**

c Viscous damping coefficient

d Diameter

F Force

f Coefficient of friction

K Service factor

l Length

m Mass

ɷ Circular frequency of external excitation force

ζ Damping ratio

**ABBREVATIONS**

PWM: Pulse Width Modulation

PMDC: Permanent Magnet DC Motor

LDR: Light Dependant Resistor

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