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**ABSTRACT**

Vibration creates excessive stresses in machine parts, it leads to loosening of assembled parts, it may also lead to partial or complete failure of machine systems. Therefore in order to reduce excessive vibration to protect 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 in order to check whether the selected shock absorber is suitable for required application.

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**EXPERIMENTAL SETUP OF SHOCK ABSORBER TESTING MACHINE**

**SYMBOLS**

c viscous damping

d Diameter

F Force,

f Coefficient of friction

K Service factor

l Length

m Mass

p Pitch

T Torque

v Linear velocity

λ lead angle

μ coefficient of friction

ω Angular velocity, circular frequency

ψ Helix angle

τ Shear stress

Kb Combined shock and fatigue factor for bending

Kt Combined shock and fatigue factor for torsion

**ABBREVATIONS**

PWM Pulse width modulation

PMDC Permanent magnet DC motor

TEFC Totally enclosed fan cooled