Name: _____ Group: _____ Date: _____

CONCEPT REVIEW 56

Guiding controls

EST

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Complete this concept review handout and keep it as a record of what you have learned.

Definitions

- Guiding is *the mechanical function performed by any component that controls the motion of one or more moving parts.*
- A guiding component or control is *a component whose mechanical function is to guide the motion of moving parts.*
- EST Adhesion is *the phenomenon by which two surfaces tend to remain in contact with each other without slipping.*
- EST In mechanics, friction is *a force that resists the slipping of one moving part over another.*
- EST Lubrication is *the mechanical function performed by any component that reduces friction between two parts.*

Main types of guiding

Type of guiding	Description
Translational guiding	*Ensures the straight translational motion of a moving part.*
Rotational guiding	*Ensures the rotational motion of a moving part.*
Helicoidal guiding	*Ensures the translational motion of a moving part while it rotates about the same axis.*

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EST Five factors that vary the strength of adhesion between two surfaces

Factor	Description
Nature of the materials in contact	*Certain materials adhere to each other better than others.*
Presence of a lubricant	*Adhesion is usually reduced by the presence of a lubricant.*
Temperature	*Adhesion between two surfaces tends to diminish with colder temperatures.*
State of the surfaces in contact	*Usually, the rougher a surface, the better its adhesion to another surface*
Perpendicular force exerted by one surface on another	*Adhesion increases as this force increases.*

EST Means of reducing friction

- *Applying a lubricant*
- *Polishing the surface of parts*