

# LIFT & ESCALATOR INDUSTRY ASSOCIATION

## MTF4 Advanced Lift Technology - Mechanical

### Course Content



#### LIFT MACHINE AND SPEED REDUCTION UNIT

- Calculation of Speed Reduction Required in a Lift Machine
- Choice of Means for Speed Reduction
- Principal Duty Requirements of the Gear
- The Lift Machine
- Worm Gearing
- The Epicyclic, or Planetary, Gear
- Helical Reduction Unit
- Efficiency of Lift Machines
- Efficiency of the Gearing
- Reversibility of Worm Gears
- Speed Limitation of Lift Machines using Worm Reduction Gears

#### THE SUSPENSION SYSTEM AND OVERSPEED PROTECTION

- Drum Drive
- Limited Benefits of Drum Drive
- Traction Drive
- Rope factor of safety
- Roping Configurations
- Rope Stretch
- Overspeeding and Suspension Rope Failure

#### GUIDE RAILS AND GUIDE SHOES

- Length of Guides
- Plumbing and Alignment
- Guide Shoes

#### LANDING APPROACH SIGNALS AND RELATED EQUIPMENT

- Final Limit Switches
- Positioning devices for normal operation
- Terminal Limit Switches
- Precautions against machine continuing to run, though car stationary

#### BUFFERS

#### LIFT CAR AND ENTRANCES

- Internal Dimensions of Car Enclosure
- Entrances
- Doors

#### DRAWINGS AND DOCUMENTATION

