Why you don't have to think twice about boarding an elevator

For people who live or work in multi-story buildings, elevators are an integral part of our everyday lives. A century of innovation and popularization has opened previously unimaginable possibilities for human transportation and revolutionized building design capabilities. Originally intended to carry freight in low-rise factories, mines and warehouses, the technological advances seen in today's elevators were once inconceivable. Now technologies exist that identify passengers and direct them to an elevator to help them quickly reach their destination. As elevator technology evolves to meet ever-taller buildings, demand for improved safety and performance remains in lock-step.

* 1853 - American inventor, Elisha Otis, introduces a freight elevator with a safety device to prevent falling in case a supporting rope breaks.
* 1857 - The first passenger elevator is installed in a New York City department store.
* 1880 - German inventor Werner von Siemens builds the first electric elevator.
* 1917 - Elevator Manufacturers' Association publishes the first model code: "Uniform Regulations for the Construction and Installation of Passenger and Freight Elevators."
* 1920s - Electromechanical systems or "interlocks" are invented to prevent elevators from moving while their doors are open.
* 1921 - First Safety Code for Elevators, ASME A17.1, is published.
* 1950s - The operator-less elevator becomes the accepted standard for major office buildings. Equipment performance receives increased attention with passengers expecting better service and improved comfort.
* 1970s - Faster elevators are introduced in response to the demand for more speed in taller buildings.
* 1980 - Door restrictors are added, locking elevator doors when the car is more than 18 inches above or below a floor.
* 1992 - A new technology using complex algorithms called destination dispatch is introduced. This decreases passenger wait times and increases elevator efficiency by grouping passengers traveling to similar floors. Passengers access elevators by keypad or card readers, enabling them to designate their floor choice before entering the elevator.
* 2000 - Updated, harmonized U.S. and Canadian elevator safety codes call for a means to detect unintended car movement with the doors open or power loss, and require the installation of a brake that will immediately stop the car.
* 2007 - The first bi-national U.S. and Canadian elevator safety code is published. An emergency phone button replaces the alarm button. This places a call to a party that is trained to take action (i.e. elevator company, alarm company, etc.), giving the exact location of the building and elevator where the call originated. Trained emergency personnel can answer the call for service. The phone also allows for two-way communication between the elevator passenger(s) and emergency personnel.
* 2011 - New RFID card-reader systems are introduced that identify passengers and automatically call an elevator to take them to their desired floor. These systems can be interfaced with building security systems, or, for example, hotel room key systems. These "touch-less" systems also have advantages for the hearing or sight impaired by providing precise visual or aural cues.

NEII member companies remain committed to developing new technology to further strengthen passenger safety in both new and old elevators. As elevator technology evolves, there are stringent codes in place to ensure machinery is maintained and inspected. These codes encourage the efficient adoption of the latest technical developments, resulting in elevator equipment that remains on the leading edge of safety, innovation and reliability.

In addition, following simple elevator safety guidelines can further improve passenger safety and every rider should be familiar with them.

For more information about elevator safety and new technology, visit www.neii.org.

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