



Consulting Engineers for Moving People and Materials

- Vertical Transportation
- Façade Access
- Maintenance Management
- Materials Management
- Materials Handling
- Horizontal Transportation

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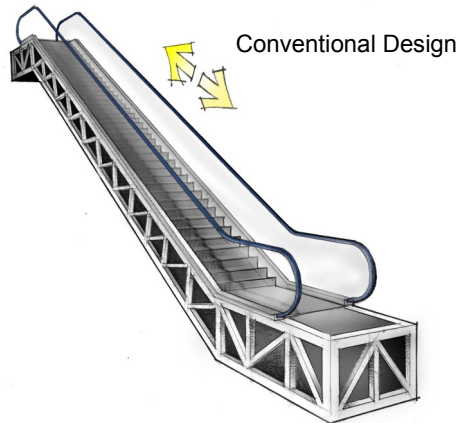
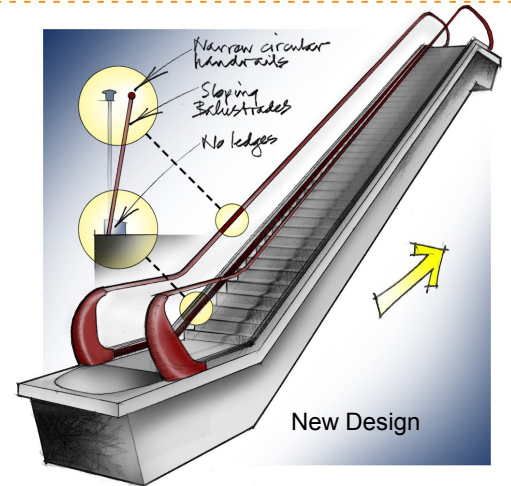
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Escalator Safety & Design - Looking to the Future

Here at Lerch Bates we've noted how escalator products have not particularly improved over the years and simply reflect the requirements of the current BSEN115 Escalator Standards. Sadly, in our view, that Standard has been revised again but not re-written.

We believe there is scope for innovative design in areas of both safety and maintenance. Particularly with long standing safety issues such as handrail surfing, falls from escalators, falls in atriums, trapping in steps and comb plates. We also need to address the need for innovative design solutions on long standing issues such as replacing old escalators in existing buildings; better and safer techniques for maintaining, cleaning and lubricating escalators; accurate monitoring of escalator performance and ride quality; and the vandal resistant escalator.



Innovative escalator design should challenge our pre-conceptions of what is possible and still deliver improvement for both the user and owner. For example, we believe that the “reversibility” of escalators is a pre-conception that should be challenged and rejected. In fact, very few escalators are actually reversed on a daily basis, and to reverse escalators in most public areas can introduce further risks. Challenging that particular design feature could be a benefit and present designers with new possibilities. Why not buy an “up” escalator that may be a slightly different product from a “down” escalator or a “reversible” escalator? It could mean that escalators of the future would be safer.

[Read more...](#)

“High Tech” award for most Innovative Technical Paper

The 18th International Congress of the International Association of Elevator Engineers, Elevcon, took place in Lucerne during 2-4 June 2010. Serving as a forum for new technical ideas and thinking on a wide range of topics the Congress makes an outstanding contribution to the vertical transportation industry.

Leading experts from over 20 countries presented a total of 44 technical papers. Adrian Godwin, Chairman of Lerch Bates Europe, presented a paper entitled “Circular Transportation in the 21st Century (without the “beautiful” counterweight)” which reviewed the many advantages and attractions of retaining the counterweight but also explored recent inventions that might overcome the many obstacles of finally dispensing with the counterweight in vertical transportation systems of the future.

It was announced at the conference gala dinner that Adrian's paper had won the prize.

Adrian (centre of photo) was delighted to receive his prize (a new laptop) and an award trophy (shown in the picture). On receiving his prize Adrian thanked his wife Elle, his family, his work colleagues at Lerch Bates and his father whose invention had led to him, in turn, inventing the concept of Circular Transportation and commented “I guess this is the equivalent of the lift industry's Oscars! I just hope I didn't win the science fiction category!”





LERCH BATES

Building Insight

6 0 Y E A R S O F E X C E L L E N C E

Improving Energy Efficiency of Escalators and Moving Walkways

Demand for energy efficient products and greener buildings has grown in the last few years and the industry has responded accordingly, presenting its customers with some solutions that meet these growing demands.

Escalators and moving walkways typically operate at speeds of around 0.5 m/s – fast enough to provide rapid passenger movement while not disregarding comfort and safety. They are used both in low rise applications, such as retail stores and commercial office buildings, and in high traffic installations, such as airports or railway stations. Energy efficient technological developments take different approaches to addressing different causes of inefficiencies in vertical transportation systems.

These causes can be divided into two major groups: direct and indirect. Direct causes are the ones that can be directly related to the equipment, the most common being:

- Friction losses
- Transmission losses
- Motor losses
- Brake losses
- Lighting losses
- Controller losses

Indirect causes are related to the operation of the equipment and are associated with equipment use and users. A brief summary of energy efficient solutions are listed below:

- Adjust motor power to suit load
- Select energy efficient drive (e.g. regenerative VVVF)
- Switch motor to Star when not in use
- Ensure the brake is not energised when the unit is stationary
- Use soft start drives
- Install passenger sensors to restart units on demand
- Slow down running speed to approximately 30% when no traffic sensed
- Adjust speed to use / demand
- Use lightweight steps
- Change gearbox to planetary type
- Use permanent magnet motors

- Switch escalator drive to standby when not in use
- Initiate controller standby after idle period
- Turn off lights when on standby
- Fit LED lighting
- Fit fibre optic lighting
- Ensure regular preventative maintenance
- Adjust all critical operating parameters during maintenance
- Set acceleration/deceleration values to lowest acceptable
- Use sealed for life bearings
- Ensure step track and handrail guides are aligned
- Switch escalators off out of hours.

Celebrating 250 years in Partnership

As part of their 250th anniversary celebrations King Sturge aim to raise at least £250,000 for charity throughout this year. Peter Leavers (left of photo), Director of Maintenance Management at Lerch Bates, presented King Sturge's Matthew Pedrazzini (right) with a magnum of Champagne in support of the '1760 Charity Appeal'.

A number of fun events will be taking place throughout the UK and the magnum of Champagne will go to the winner of one of the Bristol office events.

<http://www.kingsturge1760.com/>



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Free Maintenance Contract Review

Paying too much? Poorly drafted contract? Too many loopholes?

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