GATE SAFETY BY DESIGN

Focus on end stops

NOTABLE INCIDENTS INVOLVING FALLING SLIDING GATES

There have been a number of accidents involving sliding gates falling. One tragic case was the death of Jill Lunn in April 2013, who was killed when a giant iron security gate toppled on her at her home near Norwich, UK.

This could very easily equally happen on a manually operated gate, or on an automated gate which has been put into manual operation. Indeed, another case involved a sliding gate in a school setting, that had been changed from an automated to manual operation, the gate over-ran and fell on a child causing a serious but thankfully not fatal injury.

IMPORTANCE OF RISK ASSESSMENTS

In every case, it's clear that a risk assessment was either not carried out or failed to identify all the key risks. Normally, sliding gates use limit switches or encoders to position themselves. However, if these limits fail, it's essential to consider the risk of the gate over-traveling and falling.

PREVENTATIVE MEASURES

There are several ways to prevent gate over-travel:

- Physical Stops: These can be installed at either end of the gate's travel.
- Stop Posts and Ground Stops: These provide additional safety.
- Robust Stops for Cantilever Gates: Stops fitted to the gate and support posts can be used, especially where alignment is challenging due to factors like wind flexing.

The British Standard requires a safety factor of 3.5 times the expected maximum load for these stops.

ENSURING SAFETY

When the appropriate solution has been identified, the installer must be confident that by eliminating one risk they have not created a further danger, which means a return to the original risk assessment to check for any potential additional hazards. These risks must be mitigated or if they are deemed negligible, they may be classed as residual risks that are noted as not warranting further action. Regardless of this, it's imperative that the installer logs these actions in writing to provide a clear audit trail. Gates found without end stops should be taken out of service until remedial works have been carried out and should be securely held in a position that ensures that no accidental movement can occur until the necessary corrections have been made.