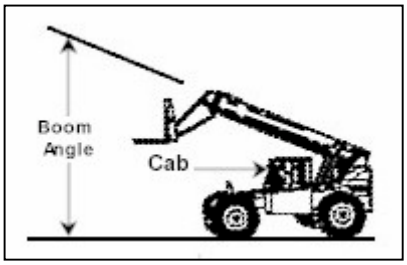
Telescoping Handlers (Telehandlers)

Telescoping Handlers (aka 'telehandlers'), are a workhorse of the construction industry. The compact nature of these machines, combined with their lifting capacity/versatility and rough terrain capabilities, also makes them ideal for countless other duties outside of the construction realm.

A telehandler is basically a small mobile crane with a telescopic boom, designed to operate on rough terrain. Hence, the familiar problem of 'tip-over' is a fundamental concern. Many manufacturers use weighted (filled) tires to provide ballast, which helps combat the issue. However, this will not give a warning, nor prevent an accident from occurring if the conditions are present. Some manufacturers have acknowledged the severity of this problem, and introduced safety systems into their telehandlers.

Two factors, which can contribute to 'tip-over' are cab attitude and boom angle. Both of these variables are most easily measured using an inclinometer. For cab attitude, both the pitch and roll axis' (X and Y) will need to be monitored, typically not exceeding a +/-30 degree maximum range. This a near ideal application for the SPECTROTILT™ *II Dual Axis Electronic Inclinometer*. Where the daily working environment and the packaging are a concern, the SPECTROTILT™ *Ratiometric Electronic Inclinometer* (single axis) will do the job.

The boom angle has the same characteristic effect as it does on a normal crane, whereas fractional changes of a degree can equate to dramatic changes in the actual working load. The relatively long reach of the boom (when extended) compounds this effect, especially at or near level.



The normal working range of the boom is 0-90 degrees. This is an excellent application for the SPECTROTILT™ *Electronic Inclinometer.* The packaging features such as a hermetically sealed sensing element, full ESD and EMI protection, an aluminum housing and fully potted electronics provide superior environmental protection. With the long-term exposure to the elements that a sensor in this type application will have to endure, these features are significant.