



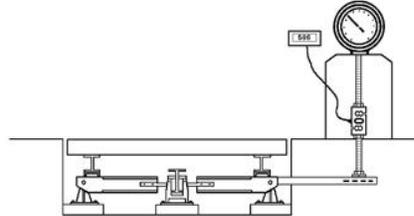
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"S" cells were originally manufactured to replace large mechanical dials on mechanical scales.



Only a single load cell was needed to replace the mechanical indicator so the cells were not precisely matched to reduce manufacturing costs. The rated signal output between cells could vary 10% depending on the manufacturer.

The "S cell soon became an ideal solution to weigh suspended hoppers. Again with only a single



cell support the systems worked fine.

When 3 or 4 cells are used the system accuracy is now affected by the error between cells. Manufacturing practices have greatly improved, depending on country of origin the tolerance between cells can still vary up to 3%.

Have you put weights on and off a vessel only to find the readings change each time?

1: For precision matched "S" cells the error is due to vessel attachments, check all connections for flexibility. There are still a couple manufacturers who match the load cell specifications to 0.1%. Load cell prices are usually proportional to accuracy however, less time is needed in set-up, calibration and troubleshooting.

2: For "S" cells that vary up to 3% these deviations will affect the weight readings as well as possible mechanical attachment problems. Check all connections for flexibility first before adjusting load cell errors. A signal or excitation trim summing board will allow you to adjust the load cells equal. This can be a time consuming adjustment if there are mechanical restrictions on the vessel as well.



"S" cells do not like side loading, an alignment assembly ensures proper pull through the cell. A clevis and yoke on at least one end of the cell will reduce the risk of failure. Long support rods also assist in reducing side load errors.