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Readout units and the calibration of load cells.

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This paper discusses the role of measuring amplifiers commonly known as readout units in force calibration measurements of load cells. The measurement process consists of obtaining the value of a physical quantity (e.g. force) and representing it as a number or in a converted form. Readout units play a critical function of obtaining the signal from the load cell, amplifying, converting, and displaying the output for capture by the user. The readout unit therefore has a significant impact on the force calibration measurement results. In this paper, characteristics such as the resolution and connection cable requirements of readout units in relation to force measurements are discussed. The effects on the readout unit's zero drift due to environmental conditions such as temperature and continuous use over time are also emphasised. The impact of the use of four and six wire configurations as well as cable length between the readout and the load cell is highlighted.

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No

Level for award (Hons, MSc, PhD, N/A)?

N/A

Would you like to submit a short paper for the Conference Proceedings (Yes / No)?

Yes

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