



Technical Article

Continuous Weighing of Solids in the Process Industries

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With the advent of microprocessor technology about to revolutionise the design and cost effectiveness of constant rate feeders and belt weighers this paper outlines the current status of the art of the design and application of constant rate feeders within the process industries.

Continuous weigh feeders, feed rate indicators, belt weighers and check-on-streams feeders have been in use on continuous processes for many years. However, with modern improvements in accuracy and in design and control philosophy they are being applied more frequently to processes which were previously carried out by batch weighing systems.

There are various types of weigh feeders available with electrical, electronic or pneumatic control, with capacities ranging from a few kg/h to 2000 t/h. Many suppliers have recently entered this important field of specialized weighing with machines which are inherently accurate but unless they have considerable application engineering and materials handling experience the overall system accuracy can often be inadequate. Richard Simon & Sons Ltd., England have been involved in the weighing industry for many decades and have as a result, built up considerable expertise in related materials handling, in order to get the best performance out of the weighers This total capability ensures that dynamic

accuracies can be guaranteed as opposed to just giving a static or dead-weight accuracy. Since constant rate feeders with their feed forward control principle afford the best potential accuracy, a more detailed description is given in order to highlight the main features.