Instrowest Case Study

Instrowest belt weighing solutions

Let Instrowest assist you with your belt weighing issues. We are not a weightometer manufacturer, and therefore we can give unbiased advice.

We are able to service many makes of weightometers and are the WA service Agents for Siemens and Tecweigh.

We are also able to service:

- Siemens
- Tecweigh
- Thermo Ramsey
- Schenck
- CST
- Webtech
- Belt way

Instrowest can also assist you with the rest of you process instrumentation requirements. Please call or contact us via email.

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Siemens MSI / MMI Weightometer – Western Areas - Cosmic Boy Concentrator

Instrowest was approached by Western Areas to investigate and rectify the accuracy and repeatability issues they were having with their onsite Thermo Ramsey Weightometers. The weightometers had previously been serviced by another provider. Two technicians flew to site to report on findings and give recommendations on how to move forward and obtain a requested accuracy within ±1%.

Upon inspection of the three weightometers installed, we found multiple issues, which were rectified by the Instrowest team.

The site metallurgists' biggest concern was the mill feed weightometer that they had tried multiple solutions on. The mill feed weightometer had consisted of a Thermo Ramsey multi-idler pivoting weigh scale frame that had been installed on the top end of the conveyor. This was later decommissioned after recommendations from the previous service company and a new single idler Thermo Ramsey belt scale was later installed in the middle of the conveyor to negate the old scale. Neither of these scales was achieving the accuracy required.

Instrowest technicians found that the curvature in the conveyor frame was allowing the belt to lift from the weigh area on startup and when running empty. This, along with poor idler alignment and incorrect calibration chain data, resulted in poor weightometer performance.

Conveyor lifting off old weigh-area

New MMI Frame Installation with balanced and adjustable rollers

The Solution

After discussions with site personnel it was decided that the whole weigh area need to be reinstalled and that the best solution was to start fresh with a new weightometer installation. By raising the weigh area up on the incoming end and installing three lead in and three lead out idler frames with balanced and adjustable rollers, Instrowest was able to ensure that constant contact was maintained across the weigh area.

The new weightometer chosen was a Siemens MMI installation. This was chosen because:

1. The excellent accuracy of ±0.25%
2. The ease of installation meant no cranes were required and the belt could remain in place (lifted with belt lifters) thus reducing time required to complete the installation
3. Excellent linearity across the range
4. Limited variance caused by horizontal forces
5. Built in redundancy in having 2 frames and 4 load cells
6. Ease of use & Instrowest's proven record with the MMI.

Results

Instrowest with was able to complete installation over two shifts (one day shift and one night shift) with final commissioning and calibration completed on the morning of the second day.

The new Siemen's weightometer installation has been installed for only a month and has already proven to be accurate and reliable. Installed in this manner, it has an advertised accuracy of 0.25%. Instrowest's client has been more than happy with the achieved results.

Melanie Flynn, Senior Metallurgist at Western Areas had the following comments regarding the installation and Instrowest's contribution.

"Alf Matthews attended site in July 2012 to inspect and make recommendations regarding a particularly troublesome weightometer, critical to metallurgical accounting. Instrowest provided a detailed and comprehensive report subsequent to the visit which included recommendations for an appropriate scale, its location on the conveyor belt and cost effective modifications to the weigh area to improve the overall quality of the installation. The new weightometer is now consistently yielding <1.0% error. I found the service professional and thorough and would highly recommend Alf Matthews and the team at Instrowest."

If you would like us to assist you with your belt weighing issues, please contact Instrowest.
Email: admin@instrowest.com.au
Website: instrowest.com.au
For more pictures please visit our Facebook page:
http://www.facebook.com/Instrowest