



Application Note

Insuring Adequate Feed Supply from Plastic Pellet & Powder Supply Day Bins

Problem:

Day bins supplying downstream operations run out of material before a production run is finished or has too much left over during a product changeover. When the bins become empty, the production line is left idle while the day bin is recharged. As the downtime increases, scrapage increases until the extruders/molders reach operating equilibrium. Too much material left in the bin will require additional transfer time to empty the bin for a different load. Existing hi/low level probes control overflow and alert the user only of empty points. Point level is too expensive to install along the entire side of the bin and would still not provide continuous level information.

Solution:

KM has two technology solutions to offer - continuous weight information using KM loadcell systems, or level information using KM ultrasonic systems.

For the tightest inventory control, a KM Load Disc is mounted under each leg of the vessel. The flexible mounting hardware option such as the gusset leg adapter, minimizes the vessel mechanical modifications and lifting required, simplifying the installation. For a more inexpensive system, half the vessel legs can be instrumented if a lower performance system is allowed, with the future option of instrumenting the other legs, if higher accuracy is needed later. The additional legs can be instrumented at an incremental cost. The single vessel SVS 2000 weight indicator provides a cost effective means of providing a dedicated display for each vessel. Multi-point indicators such as the Weigh II and MVS provide for significant cost per point benefits where dedicated displays are not required.

KM ultrasonic level systems featuring the ultra-wave™ controller and sonocell/ultra-cel//™ transducers are of benefit if the vessel cannot be weighed because of structural connections, too much re-work, etc. The ultra-wave™ controller features a unique point-level input card and the new quick-config setup. Combined with the new ultra-cel//™ transducer, which was designed specifically for plastic pellets and features a narrow beam pattern, make the startup of KM's ultrasonics the easiest in the industry.

Benefits:

- Repeatable, continuous weight or level readings to base current inventory and material demands.
- Non-contact eliminates material contamination risks.
- Workers not climbing or banging on vessels.
- Easy to retrofit on existing vessels.
- ultra-wave™ point level input interlocks KM action-probe™ point level devices for the ultimate in fail-safe protection.

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