

The Insider

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...because it's what's inside that counts

Paving the Way!

Asphalt Plants Benefit with BinMaster



Standard SmartBob Sensor & eBob Software

If you are running a continuous or batch-mix hot asphalt plant (or cement or other aggregate production facility), it is essential that silos contain adequate inventory of all materials needed to manufacture finished hot asphalt mix. When you are up against critical timelines and windows of good weather, a continuous supply of finished hot mix asphalt (HMA) keeps operations running smoothly and continuously. Running out of just one ingredient in the mix can shut down the entire operation. BinMaster level controls have proven to be a valuable asset in helping manage materials without the hassle of climbing tanks to check levels, allowing operators to view the level of all of the silos in an operation from the comfort of an office.

HMA plants, asphalt terminals and

asphalt roofing plants are typically populated with a variety of metal storage tanks, insulated steel silos and hot mix storage silos. HMA plants have at least three to five silos per site, often more. Tanks contain liquids, including liquid asphalt cement (liquid AC) and polymer modified bitumen. Other silos contain bulk solid materials such as sand, limestone, crushed aggregate and stone dust used in the manufacture of HMA. Storage bins are typically round and about 12' in diameter and 40' tall. Loadout bins containing finished HMA can be round or square.

For silos where levels need to be measured continuously or several times throughout the day, the BinMaster SmartBob sensor weight and cable inventory management system allows for levels to be monitored

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What's Inside



Paving the way.
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A PROCAP probe for every purpose.
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High Temperature SmartBob Sensor

continuously from the comfort of an office using eBob software. The eBob software can display levels for up to 16 silos at a time and allows for up to 128 silos on the network. A C-100 control console installed at the base of the silos in a protected outdoor environment also allows for personnel to take a measurement on demand or check the last measurement taken. Liquid AC tanks and hot mix asphalt (HMA) finish mix tanks can contain materials heated up to 350°F. For high temperature applications, the BinMaster high temperature SmartBob is built with components designed to safely operate in temperatures from 240°F up to 500°F. The standard model of the SmartBob2 can be used in storage tanks containing sand, limestone, filler and stone dust that are not subjected to high temperatures. The SmartBob probe most often used in liquid AC tanks is a 6" spherical float, while the spike probe is best suited to sand, aggregate and finish mix silo applications.

Tough Applications

For SmartBob applications in liquid AC and finished HMA tanks, BinMaster recommends a maintenance cycle of one to two times per year. The most common maintenance includes inspecting the cable and probes. Probes used in hot, sticky environments may be subject to buildup and the probe may need to be cleaned or replaced if excessive buildup is noted.



Spike Probe



6" Sphere Float



The BinMaster BMRX or MAX-IMA+ rotary with the GRP-22 three-vane paddle works well in heavy materials.



The GRP-3 single-vane rotary paddle installs without entering the tank.

Other devices such as capacitance probes and rotaries are also used for point level detection in sand and aggregate silos to alert when a tank may be nearly empty or full to prevent work stoppages and overfilling. For example, a capacitance probe with a Teflon-sleeved, stubby (short) probe can be used in the finish mix tanks. The Teflon coating prevents buildup of material on the probe, while the short probe length won't be bent or damaged by heavy material.

Rotaries can be mounted at the top of the tank for high level indication to prevent overfilling, while a rotary mounted on the side of the tank or in the hopper will alert when the tank needs to be refilled. The GRP-3 single-vane, stainless steel rotary paddle is appropriate for heavy materials and also inserts conveniently through a 1-1/4" NPT opening, so the rotary can be installed without entering the tank. Another paddle option for heavy materials is the GRP-22 three-vane, stainless steel paddle, which is also designed for heavy materials and works well in tanks containing sand and other dry aggregate materials.



Horizontal Tank at Asphalt Plant

A PROCAP Probe for Every Purpose

BinMaster offers PROCAP capacitance probes that can be custom configured to meet the challenges presented by different materials, vessels and operating conditions. All PROCAP models feature interference-free detection without the use of RF signals, a convenient screw-off cover, dual conduit entries for easy wiring, selectable high-low fail-safe operation and "quick-set" calibration. A new standard feature on PROCAP probes is dual time delay – which allows for a flexible time delay for covered and uncovered conditions.

Extended Models

For top mount installations, BinMaster offers flexible probes cut to custom lengths up to 35' for high, mid or low level detection.



Flexible probes are ideal for use in aggregates, coal, or other lump materials that might damage a rigid probe. The rigid probe is appropriate for granulars, pellets, slurries and liquids and can be customized in lengths up to 8' long.

Sanitary Models

Often the food or pharmaceutical industries require devices that are 3-A and USDA compliant and can operate in clean-in-place



applications. The PROCAP I 3-A & II 3-A models have no threads and feature a tri-clamp connection, making them appropriate for sanitary applications.

Hazardous Locations

The sensor housing of the PROCAP IX & IIX is rated explosion proof for Class I, Groups C & D and Class II, Groups E, F, & G making it safe for volatile applications such as dusty environments. It is available with both a standard or flush mounted sensing probe.



Flush Mounted

When space is tight or material flow or bridging may damage the probe, the PROCAP I-FL & II-FL mounts flush on a vessel wall, conveyor or chute. It does not intrude into the vessel, which enables



it to be mounted in small spaces and eliminates the risk of a probe breaking and contaminating material.

Remote Electronics

The PRO REMOTE is specially designed for hostile applications, such as high temperatures or excessive vibration. The probe and electronics are housed in separate enclosures allowing the electronics to be safely mounted up to 75' from the sensing probe.



Bendable Probe

BinMaster offers a bendable probe that can be bent to avoid obstructions in the vessel, while still allowing for adequate surface area to detect whether material is present or absent. One popular use is in smaller mixers or containers for food processing applications.



BinMaster Events

International Poultry Expo/ International Feed Expo

January 24 to 26, 2012
Booth 542 A Hall
Georgia World Congress Center
Atlanta, GA USA

GEAPS

(Grain Elevator Processing Society)
March 3 to 6, 2012
Booth 1022
Minneapolis Convention Center
Minneapolis, MN USA

NPE 2012

(International Plastics Showcase)
April 1 to 5, 2012
Booth 46024
Orange County Convention Center
Orlando, FL USA

PTXi, PBS, Chem Pharm & Pack 2

(Powder Show)
May 8 to 10, 2012
Booth 2425
Donald E. Stephens Convention Center
Chicago, IL USA

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Coming Attractions

from

BINMASTER

SmartBob MultiBob System



- More measurement points for better bin data
- Two to 32 SmartBob sensors in a single bin
- eBob software averages level for all sensors
- View levels for one sensor or all sensors
- Indicates cone up or down conditions
- Detects high spots and potential sidewall buildup
- Add strapping tables to non-linear vessels

Vibrating Rod Makeover

- BinMaster's proven, single-rod probe design
- New, triple-thread, screw-off enclosure
- LED status indicator light on the lid of the unit
- Units for hazardous locations
- Standard DPDT relays and dual conduit entries



BINMASTER

BINMASTER LEVEL CONTROLS

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