

Glossary of Keywords

ACFM	Actual Cubic Feet per Minute
Aggregate Weigh Hopper	The weighing device for hot aggregate. Also referred to as the "weigh hopper".
Airlock	A device with a rotating chamber inside, used to transfer fines from one piece of equipment to another.
Asphalt Weigh Bucket	The weighing device for new liquid asphalt cement. Also referred to as the "weigh bucket".
Backwardly	A type of fan used on baghouses or fabric filter collectors at a hot-mix plant.
Batch plant	An asphalt facility that produces asphalt-mix a "batch" at a time, or one load at a time.
Batch Tower	A field term for the entire batching tower including elevator, screens, hot bins, aggregate weigh hopper, asphalt weigh bucket, and pugmill.
Batcher	A device used to collect hot-mix asphalt at the top of a silo in small amounts and then dispense the hot-mix into the silo. This device reduces the tendency toward segregation that occurs if asphalt-mix falls into the silo a little at a time.
Belt scale	A device used to measure aggregate continuously as it flows up a belt conveyor.
Bucket Elevator	The device used to transport dried aggregate to the top of the batching tower. Also referred to as a "hot elevator" or just "elevator".
Bulk Storage Bin	A large cold-feed bin system that allows large quantities of individual aggregates to be stored directly over the hopper and feeder.

Bunker	Type of aggregate storage system in which large quantities of individual aggregates can be stored between common walls.
Burner	The device used on the dryer to produce the flame and hot gas stream that is used to dry the aggregate material in a hot-mix plant.
Cold Feed	A common field term used to denote the entire cold aggregate feed end of the hot- mix plant facility, regardless of style.
Cold-Feed Bin	The (typically) steel bin that holds quantities of an individual aggregate for metering to the hot-mix plant. Typically, this bin is charged with a front-end loader.
Combination Plant	An asphalt facility that can function as both a batching plant and a drum-mix plant.
Combustion	The process of turning fuel and air into a flame and hot gas stream.
Continuous Pugmill	A type of pugmill used to mix asphalt cement with the dried aggregate from a dryer. A continuous pugmill is different from a batch type pugmill in that aggregate enters one end and hot-mix asphalt exits the other. Material moves over the length of the pugmill.
Counter-Flow	A type of dryer in which the aggregate direction moves opposite (counter) to the flow of the gas stream.
Counter-Flow Drum-Mixer	A type of drum-mix plant that uses a counter-flow dryer. See Section 3 in addition to this section.
Cyclone	A type of primary dust collector.
Damper	A device mounted on or next to the exhaust fan that is used to regulate the amount of flow through the fan

Drum-mix plant	An asphalt facility that produces hot-mix in a continuous-flow process.
Drum-Mixer	A dryer that is used to dry aggregate and also mix new liquid asphalt with the aggregate so that the final asphalt-mix product is produced in the dryer device.
Dry mix cycle	The phase of the batch-mixing cycle before asphalt has been added.
Dryer	A device used to dry aggregate in a hot-mix facility.
Exhaust Fan	The device installed on the back side of the asphalt-mix facility that is used to provide air for the combustion process and remove steam and process gas emissions from the dryer.
Feeder	The common term for the device that sits immediately below the hopper of the cold-feed bin and is used to meter aggregate to the dryer.
Fugitive Dust	Dust that is present at different points at a hot-mix plant but is not part of the process gas stream (dryer, emission control equipment, fan).
Gaseous Emissions	Emissions from a process gas stream that are gaseous in nature, as opposed to being particulate.
Gates	The mechanism at the bottom of the hot bins that releases aggregates into the weigh hopper. Also referred to as "supply gates."
Gob Hopper	Another (field) term for batcher.
Hot bins	The storage bins in a batch tower that hold the dried, sized aggregate that is ready for mixing.
Hot Elevator	See "bucket elevator."

Hot Oil	The heat-transfer oil used in hot-mix plants to heat asphalt tanks, additive tanks, and many of the hot-mix plant components themselves.
Integrator	Another word for totalizer. See "totalizer."
Knockout Box	A type of primary dust collector.
MeanO	The sum of the numerical data O divided by the number of data values (n).
Meter	A device used to measure flow. Typical applications for hot-mix production are measuring asphalt flow and additive flow on a continuous basis in drum-mixer plants.
Micron	10^{-6} meters.
Mineral Filler	A common generic term for fine, mineral aggregate products such as lime and different types of filler materials. Typically, most of the material will pass through a .075mm (No. 200) mesh screen.
Mixer	See "pugmill."
Mixer	As it relates to drum-mix plants, either a rotating mixing drum or a continuous pugmill-type mixer
Mixing Drum	A short rotating drum that is used to mix asphalt cement with the dried aggregate from a dryer.
Parallel-Flow	A type of dryer in which the aggregate direction moves in the same direction as (parallel to) the flow of the gas stream.
Parallel-Flow Drum-Mixer	A type of drum-mix plant that uses a parallel-flow dryer. See Section 3 in addition to this section.
Particulate Emissions	Emissions from a process gas stream that are small particles, such as dust

Population	All measurements or counts that are obtainable from all the objects that possess common specified characteristics or an isolated quantity of material produced essentially by the same process.
Primary Collector	The first of two dust collectors in the process gas stream. It is used to remove the large dust particles.
Pugmill	The mixing device used to make sure the aggregates are thoroughly mixed and the asphalt has thoroughly coated the aggregates. Also referred to as just the "mixer."
Quality Assurance	Procedure used by the buyer to assure materials meet specification needs.
Quality Control	Control of the production process to meet the specification requirements. Tasks include equipment maintenance and calibration, stockpile and material handling, construction procedures, sampling, testing, and evaluation.
Radial-bladed Fan	A type of fan used on wet scrubbers or wet washers at a hot-mix plant.
Radial Stacker	Type of aggregate conveyor and stockpiling system that allows aggregates to be stockpiled at height with a conveyor that moves on an arc.
Random Sampling	Procedure to select sampling locations to avoid bias and assure that all portions have an equal chance of being sampled.
RAP	An acronym for Reclaimed Asphalt Pavement, which is hot-mix asphalt pavement that has been removed from the field and has been stored for processing into new hot-mix asphalt.
Reverse Weigh	A process used in surge silos in which the silo is mounted on load cells and weighs the content continuously. As hot-mix is dispensed from the silo, the difference is measured,

and the hot-mix in the truck is "weighed" through this process.

Scalping Screen

A screen used on drum-mix type plants to remove large, oversized aggregates and tramp materials from aggregates prior to introduction into the drum-mix dryer

Screen Cloth

The wire mesh screen used in the screening unit to size the aggregate.

Screen Deck

One level of screen cloth in the screening unit. Typically, screening units have three or four levels of screens or "decks."

Screening Unit

The enclosed sizing screen assembly that sits on top of the batch tower.

Scrubber or Wet Scrubber

A secondary dust collection device that uses water to remove particulates from the process gas stream.

Secondary Collector

The second of two dust collectors in the process gas stream. It is used to remove the smaller dust particles.

Segregation

A condition in which the larger aggregate separates from the smaller aggregate and the uniformity of the mix is destroyed.

Silo

A term generally applied to the vertical cylindrical storage device used to store hot-mix asphalt prior to dispensing into a truck. "Surge silo," "storage silo," and "surge bin" or "storage bin" are terms also used for this piece of equipment

Standard Deviation

The root mean square of the deviation from the mean.

Statistics

Science that deals with the treatment and analysis of numerical data.

Stockpiling

The process of storing aggregates in large quantities for future use.

Surge	A term used frequently in the aggregate processing and hot-mix production industry to refer to production that is out of sequence with product transfer or loadout. A "surge bin" is a storage vessel where material from production can be temporarily stored, then metered out or away at a different rate. The most popular references are "surge bins" used in aggregate production, or "surge silos" used to store hot-mix asphalt waiting dispatch into a truck. Hot-mix silos are sometimes, therefore, referred to as "surge bins."
Totalizer	The electronic portion of the belt scale system that provides a readout of flow rate in ton per hour and totals the amount of material that has passed over the belt scale.
Tower	The common term for the tall portion of a batch plant that contains the hot stone elevator, screens, hot bins, aggregate weigh hopper, asphalt weigh bucket, and pugmill.
Viscosity	A common measurement for the different types or grades of asphalt cement. It relates to the flow characteristics of the asphalt at different temperatures and is used to differentiate one type of asphalt cement from another.
Weigh Batcher	A device that hangs below a silo that is not sitting over a truck scale and is used to weigh hot-mix before dispensing into a truck.
Weigh bucket	Common reference to the device in a batch plant that is used to weigh asphalt.
Weigh hopper	Common reference to the device in a batch plant that is used to weigh dried aggregates.
Weigh Pod	A device used to weigh collected dust back into the plant process.
Wet mix cycle	The phase of the batch-mixing cycle after asphalt has been added.