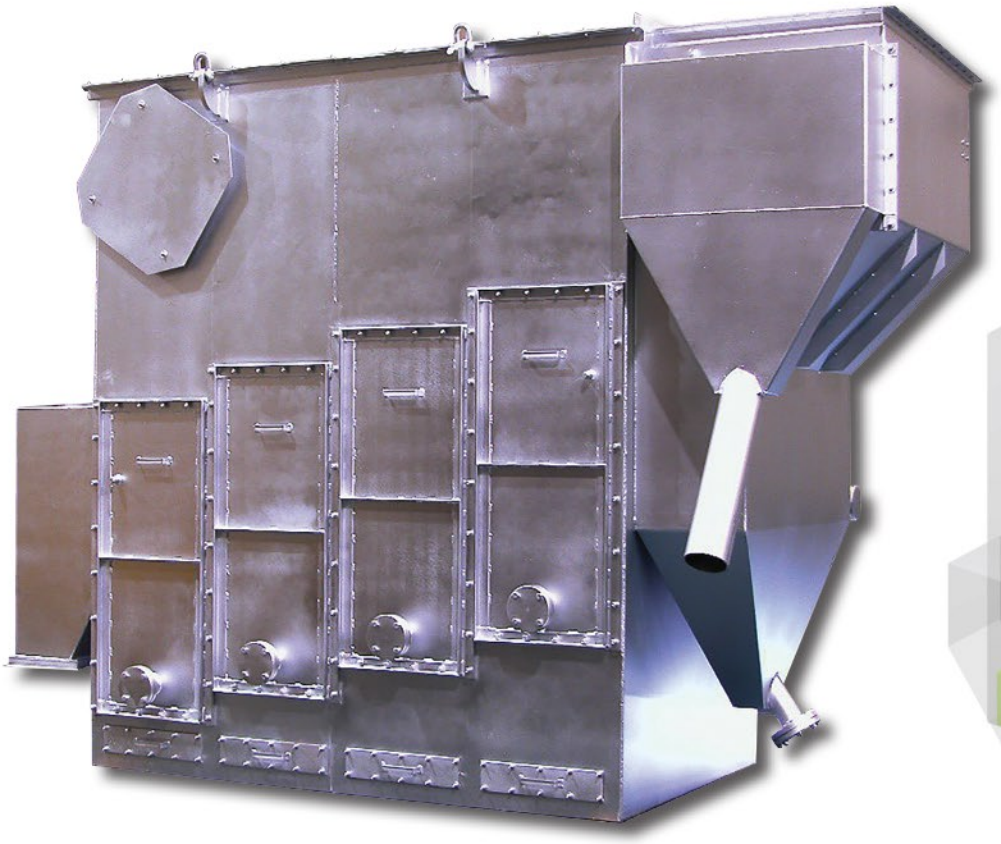
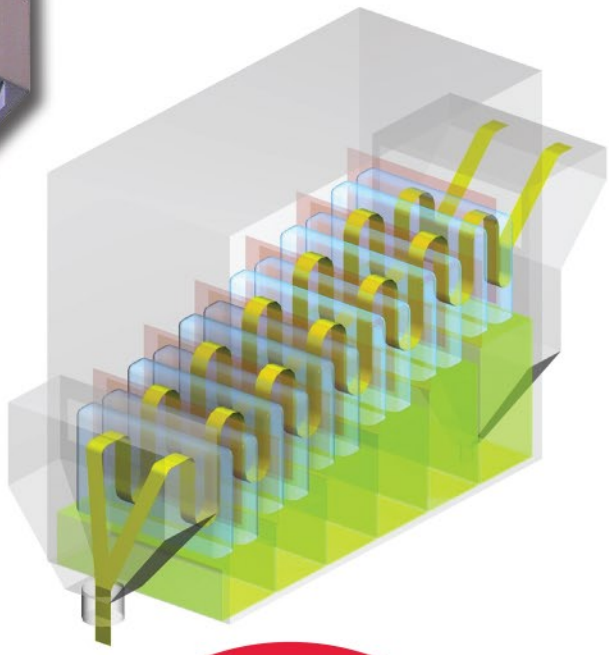
Sand System Equipment

MD COOLERS





MD Dry Sand Coolers provide heat transfer from sand to circulated water via heavy-duty finned tubes. Maximum sand cooling utilizing minimum floor space.

40 to 75 Metric Ton Units are available

VULCAN ENGINEERING CO.

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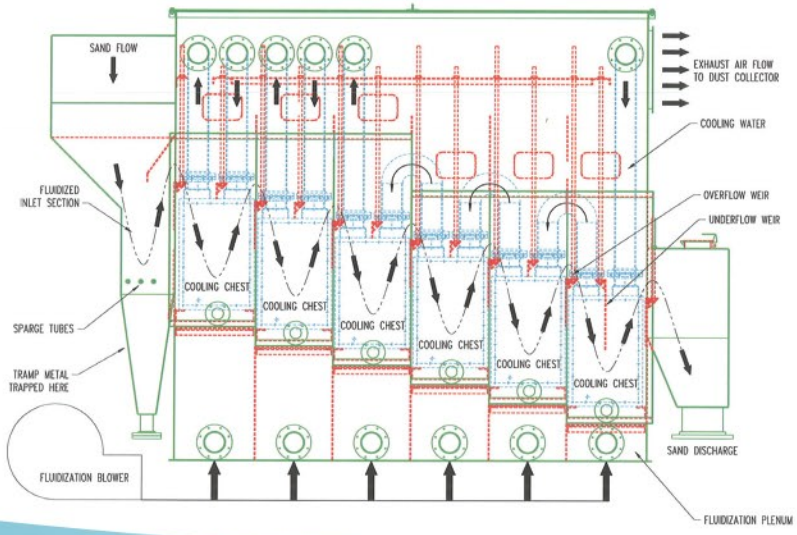
MD COOLERS

Vulcan's MD Cooler will cool grain-size sand after primary metal removal and screening. The non-linear path of sand and multi-stage weir layout ensures efficient heat transfer from sand to circulated water via heavy-duty finned tubes. A plenum-plate fluidization method maintains a constantly flowing bed of sand, thus providing ample retention time for cooling as well as protecting the finned tubes from the abrasive characteristics of sand. MD Coolers utilize evaporative cooled process water to cool the sand from 204 °C (400 °F) to within 11 °C (20 °F) of local wet bulb conditions.

Advantages:

- Multiple cooling tubes arranged in a contra-flow path to the sand.
- Finned tube heat transfer elements greatly increase the heat transfer surface area thus reducing the size of the fluidized bed which requires less fluidization air and consequently reduces power consumption.
- Finned tubes are assembled into cooling element by welding at both ends. There are no o-rings subject to damage from high sand inlet temperatures. The gasket at each end of each cooling element is not exposed to actively fluidized hot sand.
- Indirect sand-to-water contact prevents fouling of cooling tubes.
- In-house fabrication and assembly of all sand cooler components allow for tight quality control over important processes like cooling element welding and leak testing.
- Cooling elements are installed perpendicular to sand flow. Thermal expansion of cooling elements is accommodated by allowing entire cooling element to expand into non-fluidized sand area inside cooler.
- Plenum plate fluidization design requires less air volume than other fluidizer designs, and is less prone to sand wear.
- Easy-open inspection doors allow unobstructed view of sand cooler interior or inspection/maintenance purposes.
- Individual cooling bundles for ease of maintenance
- Integral vibratory inlet screen for protection from nonmetallic debris
- Inlet and exit discharge hoppers included
- Fluidization blower is provided
- Dust collection connection port is provided



Additional Equipment

Vulcan Engineering can design and build complete sand systems as well as provide upgrades and additions to existing facilities. Customized equipment and engineering services are available to make your system more efficient and profitable.

Sand System Equipment

- Sand Coolers
- Sand Dryers
- Sand Screens
- Aerators
- Sand Transfer and Conveying Equipment
- Sand Storage and Unload Area
- Screen Sand Belt
- Prepared Sand Hoppers
- Prepared Sand Belt
- Sand Bins
- Bucket Elevators

For more information, images and videos on all of our equipment and capabilities visit our website.

http://www.vulcangroup.com