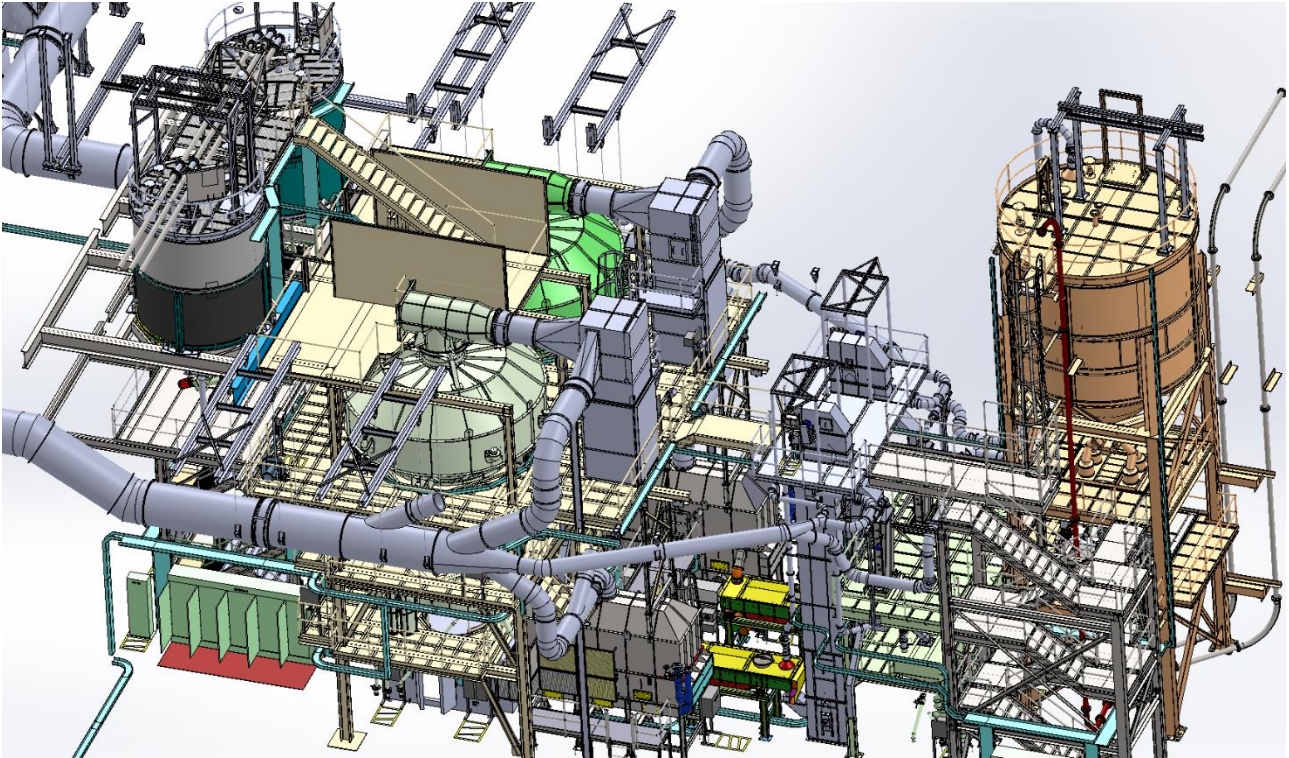


Case History: core sand regeneration system (MEXICO)



Project Requirement:

The customer wanted to regenerate approximately 18 ton/h of spent sand coming from an engine block precision sand casting process.

Our Solution:

The proposed solution was to supply two (2) thermal sand regeneration systems, each having a nine-ton per hour (9 ton/h) capacity.

Scope of work:

The Scope of Work for the system includes:

- a sand preparation section to break down sand cores and accretions to a maximum sand granule size of three millimeters (3mm);
- a silo for storing spent sand for regeneration;
- a Hot-Rec type thermal regeneration furnace that contains a heat recovery unit for pre-heating combustion air while cooling the sand coming from the calcination chamber;
- cooling the regenerated sand down to ambient temperatures;
- final regenerated sand storage silo;
- An additional regenerated sand cooling system (indirect heat exchange, sand with cooling water from chiller assembly) has been placed downstream of the storage silo so that it can be immediately put to use when regenerated sand is sent to the core room;
- The Scope of Supply includes both the closed circuit cooling water system and an exhaust and dust removal system to pull dirty air from any part of the system that might require it.

The regenerated sand has a maximum LOI of 0.1% and a silica fines level lower than 1%.