BLENDSCAN

PROCESS CONTROL FOR THE CEMENT INDUSTRY

BLENDSCAN

Automatic Blending Control System of raw material feed to Stockpiles and Raw Mills

Scantech is a global leader in the supply of on-line analysers for conveyed bulk materials in the cement, coal, energy and minerals sectors.
BLENDSCAN controls the proportioning of raw material feed into stockpiles or raw mills to obtain the desired product quality while respecting process limitations and minimising the total material cost.

There are 3 versions of BLENDSCAN.

Stockpile:

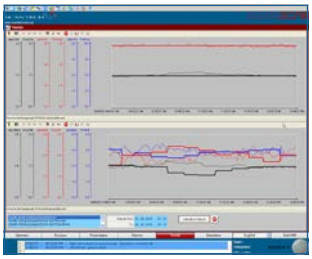
- **BLENDSCAN PILE ONLINE** – automatic blending system for quality control of stockpiles with feeders
- **BLENDSCAN PILE OFFLINE** – stockpile blending system without feeders (with trucks/buckets)

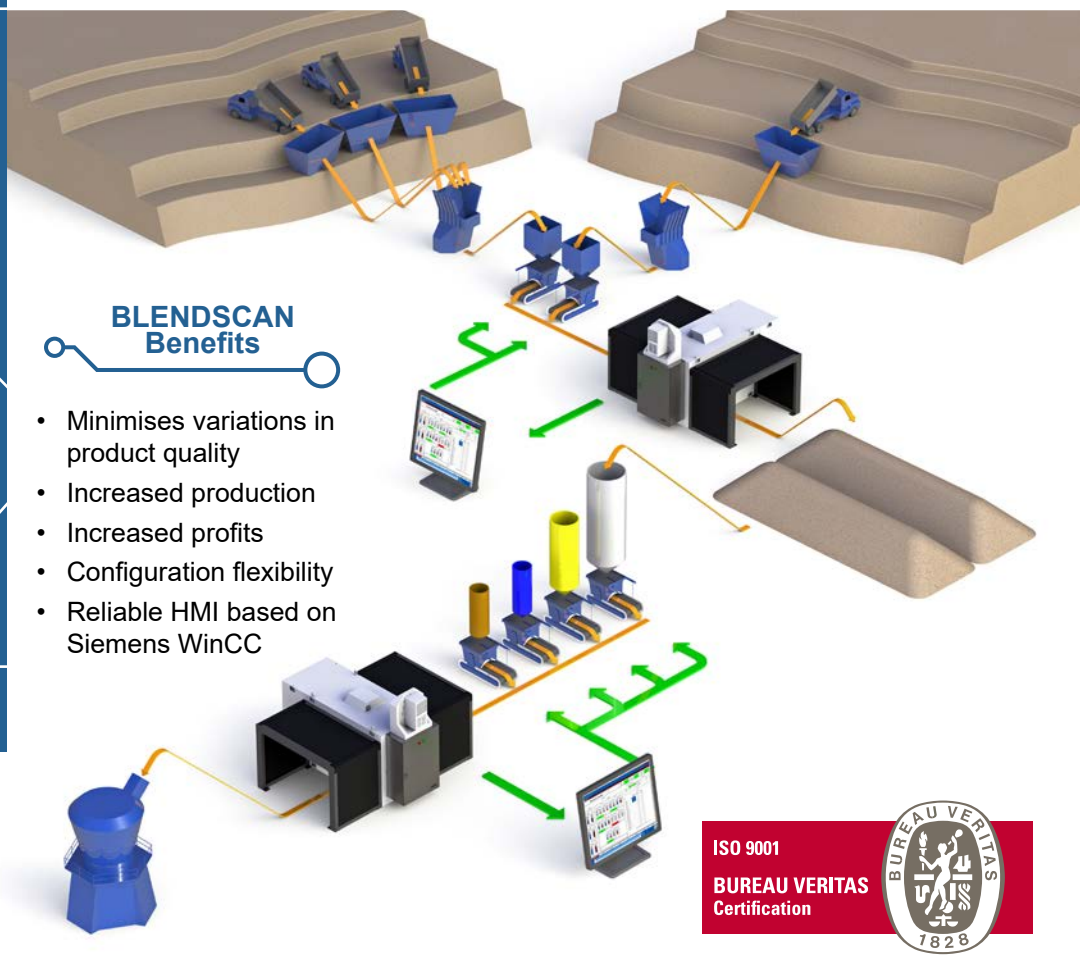
Raw Mix:

- **BLENDSCAN MILL** – automatic blending system for quality control of the raw mix

BLENDSCAN Features

- Offers a reliable user-friendly human-machine interface (HMI) to introduce the parameters, view on-line, historic trends and alarms,
- Generates electronic reports (either automatically; daily, monthly, yearly or manually; for a specific time interval).
- Takes into account constraints such as limitations on input material proportions by a proprietary constraint control and optimisation algorithm,
- Rejects anomalous readings due to short term upsets such as temporary stops of feeders or the GEOSCAN and stockpile changes,
- Exact knowledge of the input material compositions is not required, only the main differences in quality between input materials.





BLENDSCAN Benefits

- Minimises variations in product quality
- Increased production
- Increased profits
- Configuration flexibility
- Reliable HMI based on Siemens WinCC

SCANTECH
Process control specialists

ISO 9001
BUREAU VERITAS Certification

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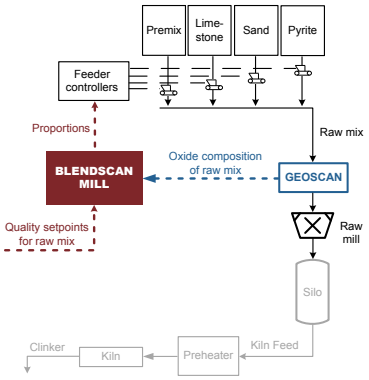
BLENDSCAN MILL

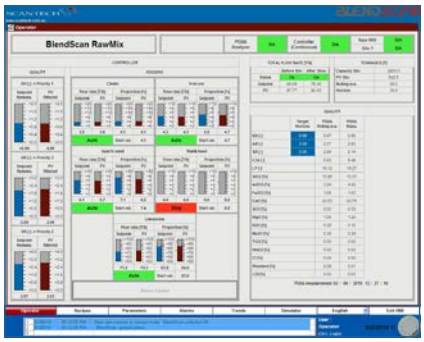
Automatic Blending Control System for Raw Mills

BLENDSCAN MILL controls the quality of raw mix product based on GEOSCAN analyser measurements by automatically adjusting the raw mix proportions (premix, additives).

Primary Features:

- *corrects possible deviations from the desired raw mix quality (e.g. LSF, SR, AR) continuously (continuous control) or at batch end (batch control) after each new GEOSCAN measurement by automatically adjusting proportions of the input materials (e.g. premix, limestone, sand, pyrite, clay, bauxite, etc.).*
- *communicates with various devices (GEOSCAN, dosage controllers/feeders) via customised protocols (S7 Industrial Ethernet, OPC DA, etc.)*
- *OPTIONAL Automatic compensator for offsets between PGNA and XRF measurements*





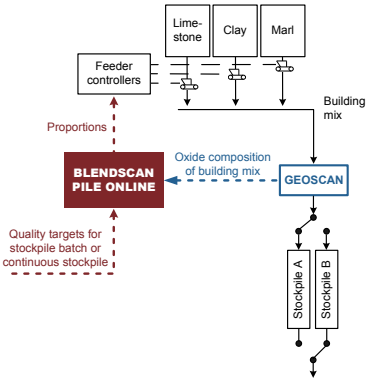
BLENDSCAN PILE ONLINE

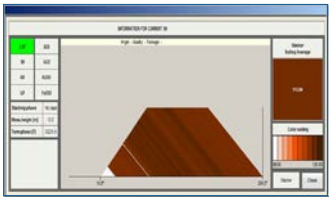
Automatic Blending System for Quality Control of Stockpiles with weigh feeders

BLENDSCAN PILE ONLINE controls the quality of stockpiles based on GEOSCAN analyser measurements by automatically adjusting feeder proportions of the input materials (building mix).

Primary Features:

- *computes and filters on-line the quality (eg. LSF, SR, AR, liquid phase, oxides) of the building mix and the cumulated stockpile*
- *corrects possible deviations from the target quality (e.g. LSF, SR, AR) for a target stockpile tonnage (batch control) or continuously (continuous control) end after each new GEOSCAN measurement by automatically adjusting proportions of the input materials (e.g. limestone premix, clay or marl premix, slag, slate, etc).*
- *visualises in real-time the quality corresponding to each layer in a stockpile layer plot (longitudinal stockpiles) or to each angular section in an angular section plot (circular stockpiles).*
- *OPTIONAL Automatic compensator for offsets between PGNA and XRF measurements*





BLENDSCAN PILE OFFLINE

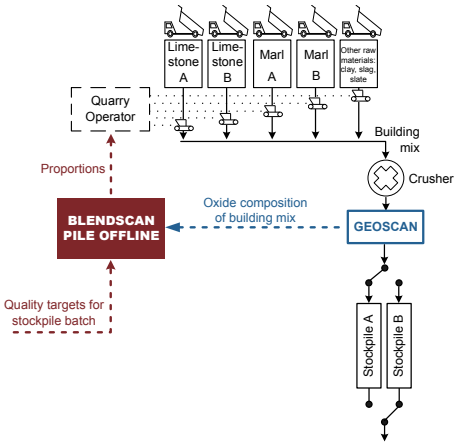
Blending System for Quality Control of Stockpiles without weigh feeders

BLENDSCAN PILE OFFLINE offers similar features as BLENDSCAN PILE ONLINE version. However, in the absence of feeders BLENDSCAN PILE OFFLINE advises the quarry operator on how many tons of each input material (e.g. distinct classes of limestone, clay, marl, etc) should be put on the remaining stockpile.

Primary Features:

- *ensuring quality targets (e.g. LSF, SR, AR) are reached optimally for a given stockpile.*
- *constraint handling so limitations on selected oxides (e.g. MgO, K2O, SO3, etc.) are controlled.*
- *minimise transition time (e.g. startup, stockpiles) and the total material cost.*

For BLENDSCAN PILE OFFLINE, knowledge of the average input material is required.



Contact Scantech to discuss how BLENDSCAN products can optimise your plant's performance.

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