BEST PRACTICE

LOCATION:	**Asphalt/Coating plant**	**ARTICLE YEAR**	**2017**
ACTIVITY:	**Production and Processing**	**COMPANY:**	**Aggregate Industries**
SUB ACTIVITY:	**Asphalt & coated stone**	**COMPANY LOCATION:**	**Express Asphalt Design**
BEST PRACTICE No:	**BP2000**	**COMPANY TEL:**	**07802 260584**
COUNTRY OF ORIGIN:	**United Kingdom**		

TITLE

Aggregate overflow cut off device

ARTICLE

DESCRIPTION

During asphalt production, when the hot aggregate bins become full, any excess material is expelled through the overflow chute. At Aggregate Industries' Darwen Plant it was usual to remove on average 10 tonnes a day. A large amount of airborne dust was generated by overflow and its removal, creating a significant respirable silica hazard to both customers and operatives. Additionally, this heated aggregate (up to 200°C) could present a burns hazard until it had a chance to cool.

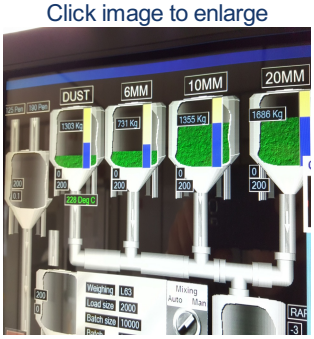
A solution was required that would eliminate the problem altogether rather than just mitigate the risks. Invertech Solutions and the company's technical department installed a PLC to micro manage this function. Data on flow rates was mapped into an algorithm which calculated how much aggregate was in storage plus what was in transit during production. When a pre-set maximum was reached, the feed would be disabled by the controlling PLC. When room was available in the storage bins the feed would start up again.

BENEFITS

- Overflow dropped from 10 tonnes per day to just one tonne per month
- 99.6% reduction in the risk posed by airborne respirable silica
- 3000 tonnes less aggregate processed unnecessarily
- Removal of hot aggregate exposure risk and associated fumes
- Reduced maintenance requirement due to less processing through the asphalt plant
- Annual savings from 1,400 less loading shovel movements
- Savings in fuel burned and emissions
- Reduced risk of collisions on congested site
- Three month pay back on investment that can be easily adapted for other plants
- Safer working environment for everyone on-site.

ARTICLE IMAGES

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