


BEST PRACTICE

LOCATION:	Asphalt/Coating plant	ARTICLE YEAR	2015
ACTIVITY:	Production and Processing	COMPANY:	AI.Express Asphalt
SUB ACTIVITY:	Asphalt & coated stone	COMPANY LOCATION:	Darwen
BEST PRACTICE No:	BP1937	COMPANY TEL:	07802 260584
COUNTRY OF ORIGIN:	United Kingdom		

TITLE	
Hot aggregate recycling process	
ARTICLE	
DESCRIPTION	
<p>Darwen Asphalt plant had a number of issues related to the recycling of hot aggregates.</p> <p>When the plant was cleaned out a loading shovel was used to collect the aggregates. The operator was required to manoeuvre through customer vehicles to reach the plant. The site is tight for space which increased the risk of vehicular collisions.</p> <p>A significant amount of airborne dust was created during the clean out process, often this would engulf the loading shovel, exposing the operator to the hazards of Respirable Crystalline Silica (RCS).</p> <p>The heated aggregates were transferred back to the aggregate stockpiles where they were stored for reuse. Not only is this heat wasted but the exposed hot stone (200°C) posed a burns risk to unsuspecting personnel visiting this location.</p> <p>A meeting was held with Invertech Solutions, electro/mechanical contractors, and system modifications proposed. The changes were discussed with the site staff before implementation. The project incorporated two key refinements.</p> <p>Firstly, it would prevent the bins from ever reaching the point where they can overflow by calculating how much aggregate is in the process and automatically switching off the feeders.</p> <p>Secondly, a PLC controlled automatic clean-out system utilising a set of synchronised plates that fold in and out of position, feeding the hot aggregate back over the screens and into the hotbins ready for use in the final product again.</p> <p>See additional pdf for more information on design</p>	
BENEFITS	
<ul style="list-style-type: none">• Clean out system re-processing 2,200 tonnes of hot aggregates p.a.• Reduced overflow tonnage from 10 t. per day to 2 t. per week.• Significant reduction in the burns risk• Significant reduction in use of shovel during production• Significant reduction in dust exposure, particularly RCS• No vehicle contact incident recorded since introduction of system• Reduction in noise generated by operation• Reduction in running time and service costs for shovel• Reduction in fuel usage of 60,000 litres per annum• Reduction in risks associated with flammable liquids• A healthier and safer work environment for all.	
ARTICLE IMAGES	