

! " # " \$ #%	&!	' () * " \$ +,
)		#
) 1 +) -./ 2*	2 3	,, 0, 0

& & ! 4! # 3 5&& 67 # # ! % 2 % !
DESCRIPTION
A High High Level Alarm (HHLA) is the ultimate safety barrier to minimise the potential of overfilling a vessel. It must be accurate, reliable in operation and easy to test. MPA's Working Group 7 involving CEMEX UK, Aggregate Industries, Eurovia, Hanson UK and Lafarge Tarmac, sought to develop a cost effective HHLA that could be easily maintained by site operators and, when tested would confirm that it was operational, not just that an electrical circuit had been made.
To minimise costs, the design, operation and materials selection focussed on simplicity of fabrication and ongoing maintenance. The unit works on the principle of a float. A brass ball is set to just below the maximum level in the bitumen storage tank or kettle. If the bitumen level rises to the point of overflow, the ball floats and releases a limit switch. The switch activates an alarm and turns off the bitumen pump in a kettle, stops a ground based pump or alerts a driver to stop the discharge from a tanker. A ram operated by compressed air is used to test the device as it simulates a bitumen spill by lifting the ball to test the control circuit
Benefits
The risk of overfill is significantly reduced
The potential for personal injury and damage to equipment are reduced
The risk of lost production and environmental damage are reduced
Low cost, simple and effective system that can be easily retro fitted
Easy to reliably test and maintain.
' +