

BEST PRACTICE

LOCATION:	Contracting - On-highway	ARTICLE YEAR:	2019
ACTIVITY:	Contracting	COMPANY:	Aggregate Industries
SUB ACTIVITY:	No Sub Activity Available	COMPANY LOCATION:	Southern Region
BEST PRACTICE No:	BP2074	COMPANY TEL:	0000
COUNTRY OF ORIGIN:			

TITLE

'KS12-16 Extendachip' – a revolution in pre-coated chipping spreader design- RUNNER UP

ARTICLE

DESCRIPTION

Aggregate Industries identified that the operation of pre-coated chippers on HRA surfacing was a high risk operation. Following a review of incidents and near miss reports it was decided that a radical review of the chipper design was required. Although there had been some small improvements, their basic design had not changed since the 50's.

Operatives and fitters from AI's Southern Regional business worked with Pavemac's design team. They reviewed the issues with the existing chipping plants and used their experience to help identify the hazards that needed to be designed out and areas where operational efficiency required improvement. The outcome was a new chipper, the 'KS12-16 Extendachip' which incorporates the following innovations and improvements:

1. Automated calibration using dashboard controls
2. Electronically controlled hydraulic gates: pre-selected spread rates at the touch of a button
3. A unique ability to extend; accommodating carriageway widths ranging from 12ft-16ft (3.65m-4.87m)
4. 300mm minimum width of spread
5. Increased hopper capacity for greater shift tonnages
6. Fixed hopper with lower load height
7. Increased fuel tank capacity (40l/18l); less down time for refueling
8. Fully 'Fail Safe' hydraulic drive chain with tracks rather than wheels
9. Removes the need for additional specialist plant for harder to reach or uneven ground
10. Uniquely provides basic telemetry showing idle time and hours worked
11. Tier 4 engine for more efficient operation and reduced CO2

BENEFITS

- A significant reduction in incidents and near misses
- 33% reduction in personnel needed to operate chipper
- Safer to operate – operator platform removes risk of slips, trips and falls
- Hydraulic drive train delivers 'fail safe' operation – brake release is hydraulic
- Operates on inclines with zero risk of uncontrolled movement
- Hopper height reduced by 50% - better all-round visibility for operator
- Improved stability with lower centre of gravity
- Fixed hopper removes risk of trapped hands or fingers
- Improved stability on uneven ground, improved braking and elimination of forward-roll
- Automatic engine cut-off and braking should lanyard connection between operator and chipper be broken
- Automatic braking when in neutral
- Engagement of staff in process enhances safety culture

ARTICLE IMAGES

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