

New technology drives shire's road sealing budget further



The One Pass System

The work of the streets of Goulburn involved the employment of Ashpave's one step in situ emulsion surfacing using 4% polymer modified high bitumen content emulsion applied at 85°C.

The Chip Sealer sprays the binder and spreads the aggregate in one forward pass. The aggregate is applied to the binder within 1 second, thus eliminating hazards such as pedestrians or vehicles coming into contact with uncovered binder and higher than previously possible spray rates are feasible.

Further, this process allows a mobile work site with traffic control measures similar to line marking to be employed and reduce disruption to traffic flows.

A computer road visualization system gives the machine the ability to place seal on road in all manner of sizes from road lane width down to 200mm square. Tapers, strips, wheel tracks and triangles.

A new road sealing solution

A look at equipment and methods in Europe reveal a technology driven by modern automated approach, the One Pass System Chip Sealer.

Ashpave's Chip Sealer is a single operator vehicle which sprays the binder and spreads the aggregate in one forward pass at pre determined calibrated application rates that are modulated and controlled by an on board computer.

Technology comes to the rescue for Goulburn Mulwarre Shire

During December 2008 Goulburn Mulwarre Shire Council embraced a new hi-tech alternative road sealing solution.

The challenge as for almost every shire council a typical annual resealing budget can cover just 1-5% of the total sealed road network, meaning very long life cycles of the seal with varying traffic loads and conditions.

Ageing surface pavements develop signs of wear and degradation causing ever increasing pothole repair scenario that Australia is all too familiar with. The ideal solution in the ideal world is simply to just reseal the entire wear surface at the appropriate time. Budgets do not allow this on every occasion, other solutions have to be looked at to help make safe and prolong the life of these pavements, without them becoming an emergency maintenance and safety burden.

Other sectors in civil construction seem to have long been adopting new technology whiles the road surfacing industry, road sealing in Australia; seem to be stuck with very old methods that have existed since the beginning of bitumen road sealing itself.



29 Bald Hills Road
Pambula NSW 2549

P 02 6495 7232 F 02 6495 7580

M 0409 787 177, 0407 957 232

E ashpave@optusnet.com.au

www.ashpave.com.au

Goulburn Mulwarre Shire Council resealed their streets with the Chip Seal solution



With an onboard computer it is possible to pinpoint road areas on the road that are in need of surface resealing. Bulk surface Road repair is flexible and easy.



The Chip Sealer sprays the binder and spreads the aggregate in one forward pass. Sections of the pavement can be treated rather than resealed entire streets.

25km street maintenance resealed completed in only 2 days

Goulburn Mulwarre Shire Council used Ashpave's One Pass System to resealed and patch seal a large area of Goulburn and Goulburn North Streets. A number of resealed and patch seal issues were addressed with the One Pass System technique which resulted in a delay of several years of a complete resealed.

The work involved patch seals to road shoulders, wheel tracks, intersections and patches from dinner plate size up to 1200m². The length of street network repaired was in the order of 25km and was completed in 2 days. Without the help of technology, such a broad variation of seal placement being done in one pass of the road would simply be too labor intensive and costly with the conventional sealing methods.

Only 4 persons were needed to complete the sealing operations instead of normally 10 people. A significant cost reduction. The council ensured sections were clean and provided a traffic control person. Ashpave's crew consisted of three people: chip sealer operator, roller & operator, traffic control.

With the Chip Sealer's ability to spray and spread in 200mm increments up to 3.1m wide, it is possible to spray and spread all manner of configurations on a lane on the run. This allows the flexibility to pinpoint and treat sections of pavement rather than resealed entire streets, using timely stipulated placement of new surface dressing.

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