

CHIPSEAL TECHNOLOGY

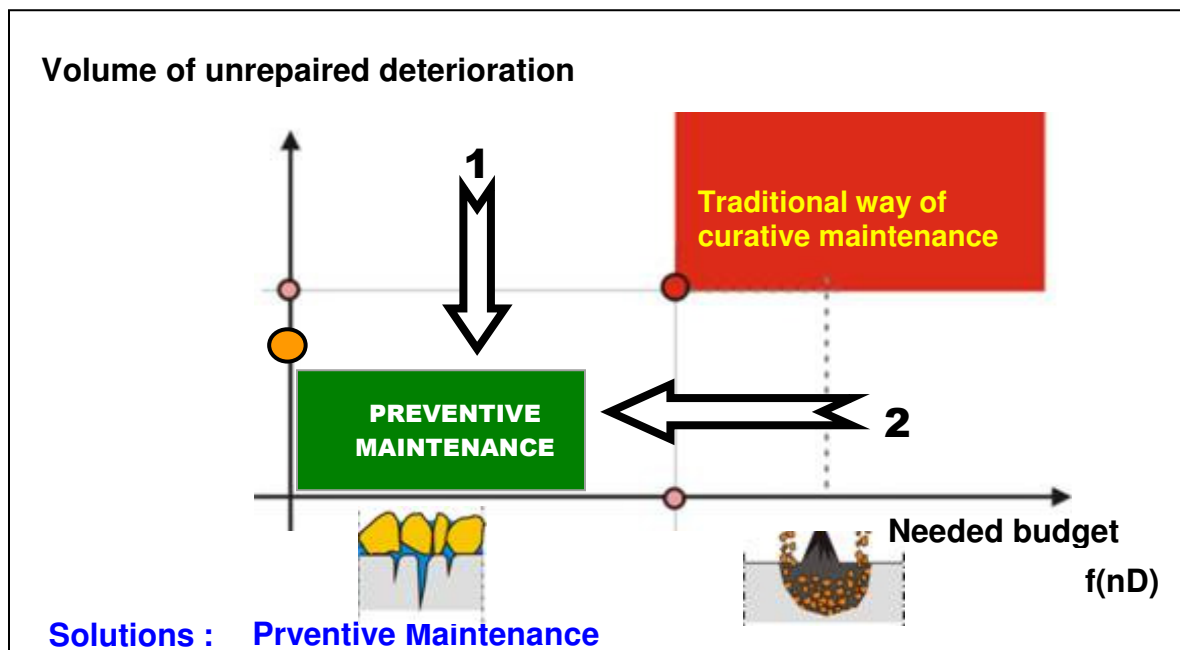


Chipseal Technology

1.0 CHIPSEAL TECHNOLOGY

CHIPSEAL TECHNOLOGY can be explained as a low cost and practical maintenance activity carried out to improve the pavement life. It is aimed at protecting the structural layer of the road and at the same time upgrading the safety aspect of the road in terms of surface texture and skid resistance.

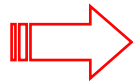
Ideally, it is recommended to be carried out before failure of the road starts to build up as illustrated in the diagram shown below.



In conclusion, by implementing this preventive maintenance method, the budget needed for the repair works and the volume of deterioration will be significantly reduce.

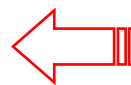
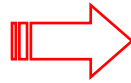
Basically, Chipseal Technology involves the spraying of Polymer Modified Bitumen and the spreading of single graded aggregate simultaneously, over the surface of existing premix.

Spraying of bitumen and spreading of aggregate done simultaneously



“CHIPSEALER 30”

A Two-In-One machine, made up of a 10 wheeler truck, housing the storage for the bitumen and aggregates.



For precise accuracy and adaptability to design requirement, CHIPSEALER 30 is equipped with computerized control unit.

Single graded **Precoated Aggregates** used in the chip sealing work.

Depending on the suitability and design of the road, the chippings can be produced at various sizes i.e. 10 ,14 or 20 mm

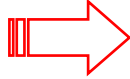
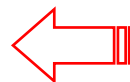


Photo showing surface texture of the road after work completed



Diagram on the left showing how the aggregates fitted in and arranged themselves under the compaction effect of the vehicles



CHIPSEAL Operation

- I Mobilization and site preparation which include machinery and material required. Precoated chippings can be stockpiled at the site should the source of supply is too far away.
- ii Cleaning of site from dust, water and debris using mechanical power broom
- iii Spraying of Polymer Modified Bitumen and spreading of precoated chippings.



- iv Compaction of newly laid chipseal surface using pneumatic tyre roller



- v Removing of excess chippings using mechanical power broom



Road Marking Activity

Road marking is being carried out in a similar way as it was done on other premix or concrete road surface.



2.0 BENEFITS

- A) Cost saving up to more than 30 % in solving functional defect of the road.
- B) Longer pavement life which resulted in reduction of yearly maintenance cost.
- C) Safer and durable roads for the public in term of skid resistance, better surface texture and improved road surface drainage.
- D) Fast execution of work due to high work productivity per day which resulted in less obstruction to traffic during construction.

3.0 PHOTOS OF COMPLETED PROJECT USING CHIPSEAL TECHNOLOGY



Chipseal activity in progress at Serom 6, Johor



A visit by YAB Dato' Abdul Ghani Othman to Serom 6, Johor



Completed Chipseal work in Felda Bukit Rokan FT 1276



Official visit by JKR's officers to FT 1276 on 21st December 2004



Completed Chipseal work in Felda Jelai FT1279



Chipseal work in progress at Parit Bulat, Muar

CONCLUSION

1. The recommended CHIPSEAL TECHNOLOGY has proven to be successful in protecting the structural layer of the road and at the same time resulted in great improvement in the skid resistance and surface draining effect of the road.
2. Saving up to more than 30% in the construction cost shall come as a reward to the investment made by the Government in the preventive work using CHIPSEAL TECHNOLOGY in comparison to the conventional resurfacing method using premix.