

Diamond grinding in Australia - the first ten years 2009-2019

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ABSTRACT

Diamond grinding of concrete road surfaces was introduced in Australia in 2009, after about 50 years' experience in the USA. In its first 10 years of use in Australia, it has been used on many state and local government road classifications and also tunnel pavements in an inventory equivalent to about 30km of 4-lane road. It has been used both at construction or to rehabilitate older roads. Many of the latter had received no prior surface rehabilitation for at least 50 years since initial construction. Two types of grinding are in use, conventional and low noise grinding. Both have favourable noise characteristics. This paper describes the inventory, process, operational and output considerations, riding quality and noise, and cost factors associated with diamond grinding. Also presented are sustainability benefits arising from incorporating sacrificial thickness at construction for long term surfacing needs.