

Introduction

The traditional alternative for rehabilitating worn road surfaces is to replace lost material with pit-run gravel, blasted rock, or crushed material. However, this often involves costly transportation and does not reduce the use of this limited resource. To tackle this problem, equipment has been developed in Canada and Australia to convert accumulations of oversize roadside rock into usable resurfacing aggregate (Bennett and Provencher, 1995).

The Broonshire Rockbuster has been working extensively in Australia since 1970 and has just recently been bought into New Zealand for Taylors Contracting. The new BH - 1220 Series II Rockbuster was observed crushing road base gravels for Fletcher Challenge Forests in Nelson.

System Description

The Rockbuster is a mobile rock breaking unit to produce graded crushed aggregate from oversized rock and rubble of up to about 600 mm in size. Rock boulders are broken by a series of blows from hammers rotating on a high speed shaft in a steel compartment. Hammers can be set by hydraulic action to control the size of the crushed gravel output. The final result is a well graded crushed aggregate to form a compacted firm road base (Figure 1).

The machine is towed along a windrow of rock material (Figure 2) that has been retrieved from the roadside and the ditches using a grader. To complete the process the crushed material is then spread with a grader.

TECHNICAL NOTE

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THE BH - 1220 SERIES II ROCKBUSTER



Figure 1 - Well compacted firm road base

Gravels that are available on site are used for crushing with the Rockbuster, in lieu of incurring the long haulage distance from the rivers in the valleys below. This also saves the royalty charge incurred when using the river metal.

In the Nelson/Marlborough area, Moutere gravels are in abundance and are easily removed from the batters and table drains and windrowed along the road for crushing with the Rockbuster. This provides a ready supply of crushed metal for road construction and maintenance on site.



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