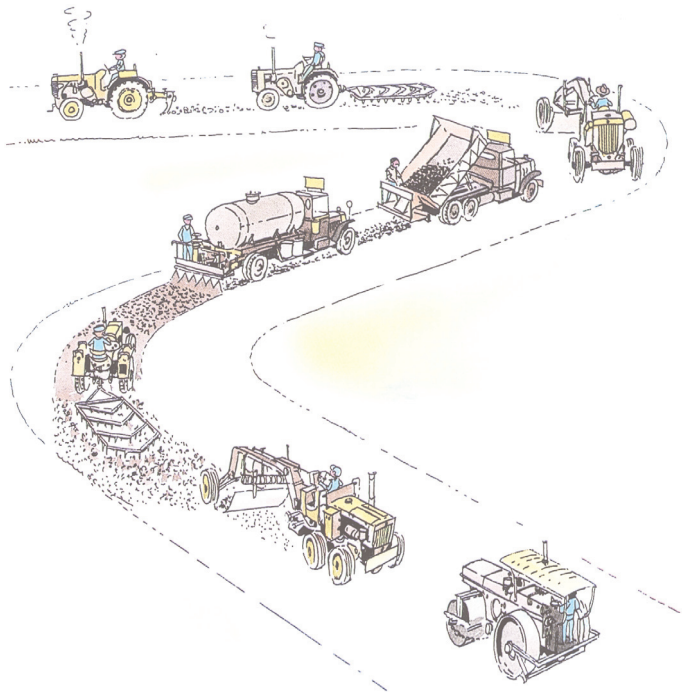


10 GRAVE-EMULSIONS

History



Developed in France in the early 1960s, grave-emulsion is derived from a low cost technique for stabilizing secondary roads, known as the retread process: it consists in scarifying roads, reprofiling them with a grader, correcting the gradings by bringing in new aggregates and improving the cohesion of non-cohesive materials by mixing with bitumen emulsion at a level of 5 to 6kg/m².

This process consisted of several operations: scarification, harrowing, reprofiling, addition of aggregates, application of the emulsion, mixing using a Rotavator and a disc harrow, final blading and rolling. The spraying/mixing train made two or three passes over the section to be treated.

The retread process yields excellent results.

Its adaptation in primary network pavements consisted in using 100% added aggregate, for instance a 0/50 gravel, as "gravel pitmaterial".

This gravel was mixed with the bitumen emulsion, in an *in-situ* operation. To improve the efficiency of this type of operation, purpose designed stationary or mobile plants were developed.

In 1974, SETRA and the LCPC set the first official specifications for grave-emulsion by publishing a "Directive for constructing the foundation courses of pavements in grave-emulsion", which at the time was the outcome of the results of experimental worksites with grave-emulsion used as a base course or foundation.

