W.R. Kuntz *Computermodel van een scraper. Rekenprogramma onder Windows.*
Computer program, Report 93.3.TT.4239, Transport Engineering and Logistics.

There is still little knowledge of the excavation process of a scraper. In this report, the excavation process of a frontscraper has been modelled. On the basis of this model a computer program has been written that calculates the forces that work on the scraper and the power that is needed to drive the scraper.
This computer program enales a designer to experiment with the model to achieve insight in the influence of important design parameters.

From experiments with the program follows:

- The forces that work on the chain and the power that is needed to drive the chain depend on the velocity of the chain (negative exponential).
- The forces that work on the chain and the power that is needed to drive the chain increase when the width/height-ratio of the scraper blades increases.
- The influence of adhesion and, to a lesser degree, of cohesion increase when the width/height-ratio of the scraper blades increases.
- A scraper has a low energy consumption.

Reports on Transport Engineering and Logistics (in Dutch)
