

路面高圧水洗浄における路面性状の影響に関する研究

小林 正利¹、清水 忠昭²、平山 貴浩³

¹株式会社福田組 技術部 (〒951-8668 新潟県新潟市中央区一番堀通町3-10)

²福田道路株式会社 技術研究所 (〒959-0415 新潟県新潟市西蒲区大潟2031)

³(株) EARTHSHIELD (〒963-8041 福島県郡山市富田町字権現林11)

The Study of Road Surface Micro-texture's Effects for the Pavement's Decontamination by High Pressure Water Washing

Masatoshi KOBAYASHI¹*, Tadaaki SHIMIZU², and Takahiro HIRAYAMA³

¹Technical Divisin, Fukuda Co., Ltd. (3-10 Ichibanbori-Dori, Chuo-ku, Niigata, Niigata 951-8668 Japan)

²R&D Lab., Fukuda Road Construction Co., Ltd. (2031 Ogata, Nishikan-ku, Niigata, Niigata 959-0415 Japan)

³Earthshield Co., Ltd. (11 Aza- Gongennbayashi, Tomita-cho, Koriyama, Fukushima 963-8041 Japan)

Summary

In the result of “decontamination technical demonstration project” by Ministry of the Environment, it has become clear that the effect variation is larger in high pressure water washing method, compared with others in road surface decontamination technology. In this study, we have hypothesized the fact at the difference of micro-texture of the road surface, by carrying out high pressure water washing method in different kinds of road surfaces and verified the relation between washing efficiency and micro-texture road surface. Positive correlation has admitted between the washing number of times and radiation reduction rate and the trend of primary regression equation (i.e. radiation reduction rate per washing time) is indicating that decreasing tendency of radiation carried by the increasing of micro-texture of the road surface. Here, we proposed the method to estimated essential washing number of times to achieve the targeted radiation reduction rate from the relation of that trend and micro-texture of the road surface.

Key Words: Decontamination, Micro-texture of a road surface, Washing with high-pressure water, Radiation reduction rate

和 文 要 約

環境省除染技術実証事業の結果、路面除染技術の中で高圧水洗浄は他の工法と比較して効果のばらつきが大きいことが明らかとなった。本研究は、その要因は路面のマイクロテクスチャの違いに由来すると仮説し、異なる種類の路面において高圧水洗浄を実施し、路面のマイクロテクスチャと洗浄効率の関係を検証した。洗浄回数と放射線量低減率に正の相関性が認められ、その一次回帰式の傾き（すなわち、洗浄一回当りの放射線低減率）は路面のマイクロテクスチャ増大に伴い減少する傾向を示した。その傾きと路面のマイクロテクスチャの関係から、目標とする放射線低減率を達成するために必要な洗浄回数を推定する方法を提案した。
