Test research regarding measures of road surface freezing and others in snowing time (Part 2)

[Point]

Anti-freezing agent usage for road surface measure in wintertime of snow-covered cold areas is increasing, and it causes snowy-cold project cost, as well as the effect on environment around roads is concerned, therefore, development of environmentally friendly and also lasting efficient new anti-freezing agent, and establishment of efficient and effective spraying method are hoped.

Then, in this research, we aimed development of non-chloride typed anti-freezing agent, which can reduce the effects on environment around roads and structures, performed interior assessment tests. As a result of coagulation point, ice melting amount, and steel plate corrosion tests, we concluded that acetic acid compounds are suitable as non-chloride anti-freezing agent, especially, sodium and potassium based salts are low-molecular weight and high efficiency. Moreover, we developed simple sliding friction measuring equipment for indoors as new assessment method of anti-freezing agent, and examined regarding the best measuring condition and so on. In the future, we need to enforce more precisive assessment using non-chloride.

Keyword: anti-freezing agent, non-chloride, coagulation point, ice melting amount, plate corrosion, sliding friction coefficient