

Short Summary of Topic VI: Development of Snow-Removal and Ice-Control Technology

To be used as a basis for: Topic summary at the Closing session and the PIARC magazine

There has been a great interest in this main topic, and 25 papers were assigned for oral presentation, 18 for poster presentation. The authors come from all over the "winter world" where people are concerned with securing road traffic in winter.

The main issues/themes of the sessions were:

Development of machinery and equipment

Technology for control of snow drifting and snow and ice on road signs

Effects of anti-icing agents and equipment for spreading

Anti-icing pavements-porous asphalt

Measurements of the effects of different countermeasures

International exchange of maintenance experience

Some important work can be mentioned:

- In Hokkaido but certainly also in other parts of the winter world, we can see the development of different types of snow-prow trucks for roads and bridges, single lane loading types and special equipment for bridges.
- The new sanding methods being developed in Scandinavia is based on adding hot water to the sand. Satisfactory friction values have been found to be maintained up to one week on roads with an average daily traffic up to 2000 vehicles per day.
- In Japan, there is important work going on for automatic control of spreading or de-icing agents.
- We have heard about different ways of systematic international exchange of winter maintenance experience. This PIARC conference is about international exchange of research and new ideas. The COST 344 European Commission Project on "Improvement to snow and ice control on European roads and bridges" is an example of practical European Cooperation at its best.
- There is a lot of work going on in the field of anti-icing pavements. We have heard several presentations on open graded structures being either a chemical or physical type of pavement.
- There are also several papers on the effect of alternative de-icing agents both in the air and on the road.
- In the future, it will be important to promote research and development in this important field. It will be a challenge to get the funding and to achieve good cooperation between all parties involved in road winter maintenance -- the machinery and equipment producers, the material producers and suppliers, the maintenance contractor, and the public road agencies.