

COST Action 727 – Summary of Phase 1

Fikke Svein M.¹, Heimo Alain

¹Consultant

Lindeveien 1, NO-1470 Lørenskog
+47 908 47 661, fikke@metconsult.no

The COST Action 727 “Measuring and forecasting atmospheric icing on structures” was established in April 2004 and comprised originally 12 signatory countries: Austria, Bulgaria, the Czech Republic, Finland, Germany, Hungary, Norway, Slovakia, Spain, Sweden, Switzerland and the United Kingdom. Following the “Memorandum of Understanding” (MoU), three working groups were established, WG1 “Icing modelling”, WG2 “Measurements and data collection on icing” and WG3 “Mapping and forecasting of atmospheric icing”.

Phase 1 of the action was dedicated to gathering available information for comprehensive state-of-the-art reports with the following deliverables:

- Reports on the state-of-the-art
- Inventory of users' needs based on analyses
- Working plan for the Second Phase of the Action

The Phase 1 Report contains information on:

- Definition of icing: WG 2 recommends adopting the ISO12949 standard.
- Past and present activities: International projects such as WMO/CIMO Instrument Inter-comparison, EUMETNET SWS I and II projects, EU/WECO and NEW ICETOOLS projects, as well as entities like IEC/CENELEC, ISO, IWAIS are shortly presented.
- Standards: Prevailing standards in use (ISO, IEC and WMO) dedicated to icing on structures and icing measurements are shortly presented.
- Measurements under icing conditions: As the WMO has presently no specific recommendations for measurements performed in harsh conditions, e.g. icing, a set of recommendations is presented concerning classification of sites and classification of sensors depending on severity of icing and the site climatic environment.
- Requirements and availability of ice detectors: It is shown that requirements on ice detectors are dependent of the user's requirement (wind energy, power lines, meteorology etc.) and on the application. Installation procedures are presented, depending on users requirements together with validation and verification processes.
- Examples of existing data and experiences with existing ice detectors: A number of available long term experiments are presented concerning icing measurements and characterization of icing sensors.
- Recommendations for future activities