

# ROAD WEATHER INFORMATION (RWIS)

QUALITY THROUGH INNOVATION AND DESIGN

March 2017



Energy, Water, Environment.  
Global Sustainable Solutions.

## 12 Road Weather Information System (RWIS) - SafeRoad System



ENE A Grupo®'s SafeRoad System is a Road Weather Information System (RWIS) offering accurate environmental data for road traffic safety purposes used also by road operators and maintainers to support decision making.

The Road Weather Information System (known as RWIS system) is comprised by a number of in the field Remote Environmental Monitoring Stations (REMS), to which are connected several types of sensors for the measurement of three types of road weather data : Atmospheric data, Pavement data, and Water Level data.



### **Atmospheric data include:**

- Air temperature and Relative Humidity
- Visibility distance
- Wind Speed and Direction
- Precipitation type and rate
- Cloud cover
- Waterspout occurrence
- Lightning
- Air quality

### **Pavement data include:**

- Pavement temperature
- Pavement freezing point
- Pavement condition (e.g., wet, icy, flooded)
- Pavement chemical concentration
- Subsurface soil temperature

### **Water level data include:**

- Water level in streams or rivers near roads

All the information generated by the REMS is transferred to the Central RWIS Station via GPRS/3G, Radio-Link, Satellite or via a physical fiber optic link, where by means of a specific software, data is processed to develop nowcasts or forecasts, and display or disseminate road weather information in a format that can be easily interpreted by a manager.



Transportation managers utilize roadway warning systems, and web sites to disseminate road weather information to travellers in order to influence their decisions. This information allows travellers to make choices about travel mode, departure time, route selection, vehicle type and equipment, and driving behaviour.

Data communications of ENEA Grupo® RWIS System is supported by different standard communication protocols such as NTCIP, DGT, etc.

The REMS stations of ENEA Grupo® RWIS System are based on the METEODATA-3000C Data Acquisition and Transmission Unit. This is a very advanced data logger which allows the connection of almost any type of environmental sensors, allowing also data transmission via different communication ways.

