

Anemological monitoring with Wind Watcher at La Spezia Container Terminal



The anemological monitoring of ports is a fundamental element to ensure the safety of maritime operations and logistical continuity. In the port of La Spezia, one of the main merchant ports in the Mediterranean, the installation of LSI LASTEM's [Wind Watcher](#) system represents a turning point in the management of critical atmospheric variables, helping to improve the safety and efficiency of operations. This system allows you to detect wind variations in real time, significantly reducing the risks associated with sudden or intense events, such as the blockage of port cranes or accidents during loading and unloading manoeuvres.

Protection, safety and health are priority issues for the [Contship Group](#), which has recently launched an investment and development plan in the La Spezia terminal, aimed at further enhancing the safety of port operations and overall operational efficiency.

Comprehensive monitoring of weather variables

In addition to wind, it is essential to monitor other weather variables such as temperature, humidity, atmospheric pressure, and precipitation. This data is essential to ensure an overall view of the environmental conditions that affect port activities. The weather station integrated into the *Wind Watcher*

system allows you to collect and analyze information on all these variables, providing decision support based on precise and updated data.

Wind Watcher: technology and functionality at the service of LSCT

The LSI LASTEM Wind Watcher system chosen by the La Spezia operator represents technological excellence in anemological monitoring. With 14 strategically located wind measuring points and a central weather station, the system ensures maximum operational continuity and safety. Thanks to the implementation of the Wind Watcher system, LSCT will be able to guarantee the following activities:

- Real-time data acquisition: the anemometers transmit detailed information every second to the central software;
- Advanced data processing: the software analyzes data in real time and identifies any alarm conditions;
- Articulated alarm logic: 5 alarm levels based on thresholds and wind processing types for flexible response;
- Alarms by area: grouping of anemometers to generate specific alarms for micro-sectors, for targeted monitoring;
- Real-time notifications: alert via email, desktop and mobile devices when security thresholds are exceeded;
- Management of redundant measurement points: the software uses two anemometers side by side for each detection point, improving reliability and fault tolerance;
- Continuous data storage: saving each detection to create a historical database for subsequent analysis;
- Interoperability: data visualization in the control room and on operators' devices, ensuring optimal management;
- Server redundancy: the system can be installed on two servers to ensure service continuity in the event of failure of the main server.

Integration and use of the anemological monitoring system

The system was designed to integrate seamlessly with existing port infrastructure. Anemometers are installed on cranes, towers and other key structures, while the central weather station collects data. This data is

processed and shared with the relevant figures through intuitive interfaces, improving operational safety and optimizing port activities.

The vision for the future

Looking to the future, the adoption of innovative technologies for environmental and anemological monitoring will continue to be a key element for the sustainable development of ports. Systems such as *Wind Watcher* represent an added value not only for safety and operational efficiency, but also for the transition to a smarter and more sustainable port model. The port of La Spezia is charting a path that others can follow, demonstrating how technology can turn challenges into opportunities.