

MET Mast North Sea Wind (NSW)



Mierij Meteo Nederland BV – Barry Engelen

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Introduction Mierij Meteo



Mierij Meteo was founded in 1982. Now Mierij Meteo is turned into a specialist for meteorological systems and instruments.

- Design and installation of turn-key systems
- Own developed range of meteorological instruments

Mierij Meteo has executed many projects where meteorological information is essential

- Offshore Metmast NSW for the first Offshore wind park in W-Europe (2004, for Shell and Nuon)
- National Ice Warning System (installation in 1992, maintenance and expansion since then)
- Network of wind and visibility sensors in the Ports of Rotterdam and Antwerp

Introduction Mierij Meteo

Mierij Meteo develops and manufactures meteorological instruments, e.g.

- Wind sensors
- Temperature and Humidity
- Precipitation
- Fog and visibility
- Solar radiation (by Kipp & Zonen)

The meteorological instruments are maintained and calibrated in house.

- Certified wind tunnel and wind vane tester
- Calibration bath for Temperature sensors

Mierij Meteo is located in De Bilt (The Netherlands) and has 16 employees

Since 1 november 2006 Mierij Meteo has been taken over by Kipp & Zonen.



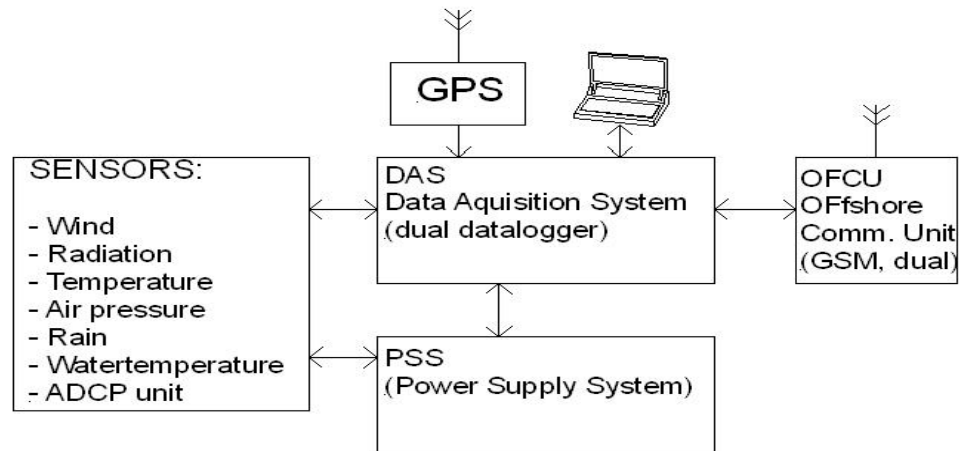
MET Mast NSW

- **Height: 116 meter**
- **Sensors at 3 heights**
- **3 Beams at each height**
- **Data acquisition system**
- **GPRS data communication**
- **Autonomous Power Supply System**
- **Nav Aids**

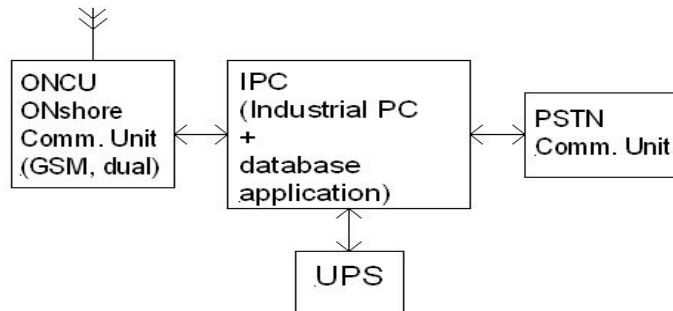


Overview of Meteo Monitoring System

Offshore Data Acquisition And Power Supply System:

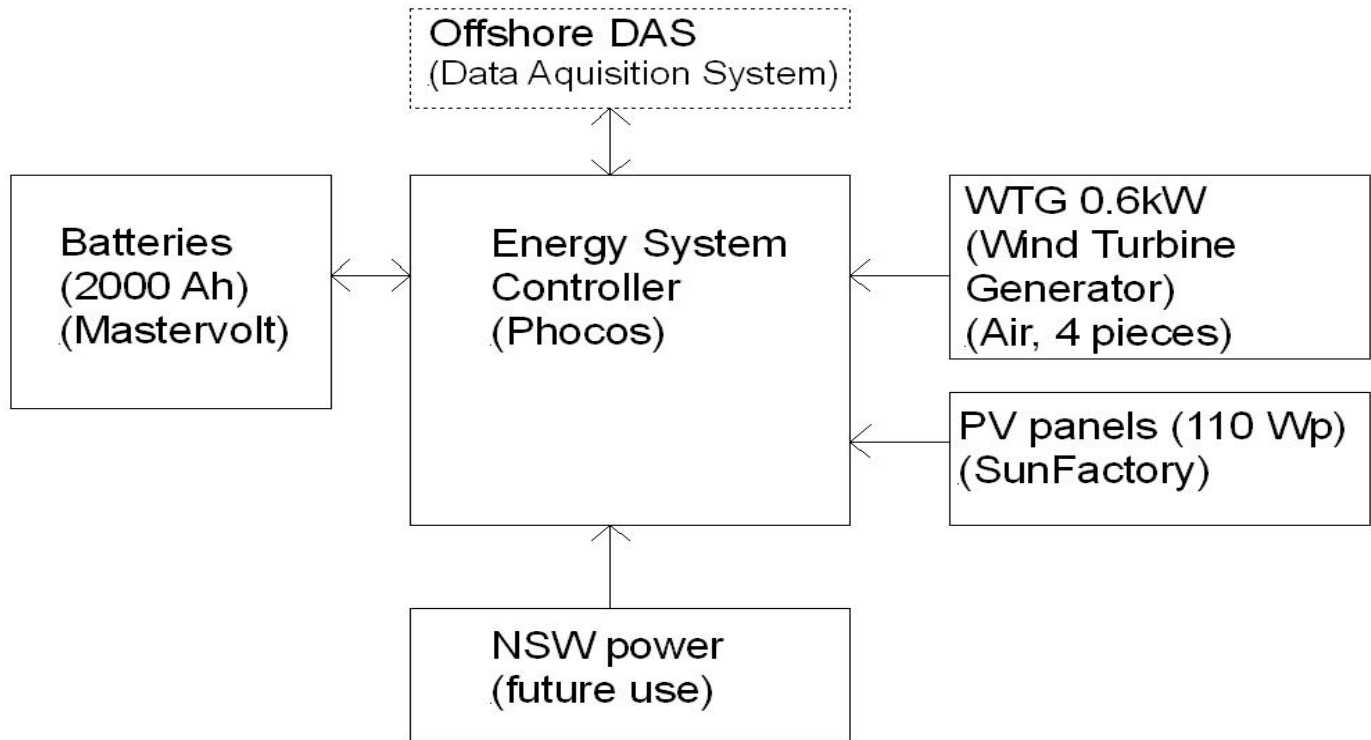


Onshore Data Retrieval And Storage System:



Power Supply System

Autonomous Power Supply System:



Instrumentation

- **Wind vanes (9 pcs)**
- **Anemometers (9 pcs)**
- **Shock-/vibration proof instruments**
- **According to IEC 61400-12 (PowerCurve)**
- **Temperature / Humidity Sensors (3 pcs)**
- **Barometric Pressure and Raindetectors**
- **ADCP (Wave height, current)**



Maintenance

- **Instruments: every 6 months swap of sensors**
- **Revision / calibration (According to IEC 61400-12)**
- **Power Supply and Nav Aids**
- **Continuous monitoring of data**
- **Data validation**
- **Complete set of spare sensors ex stock**



Wind sensors for Wind turbines

Mierij Meteo manufactures dedicated wind sensors for Wind park operators

- Withstands high amplitude vibrations and shock effects of wind turbines
- Can operate under extreme environmental conditions ($> -40^{\circ}\text{C}$!)
- Low Maintenance (less then once per 5 year)

Wind vane model 660



Anemometer model 067



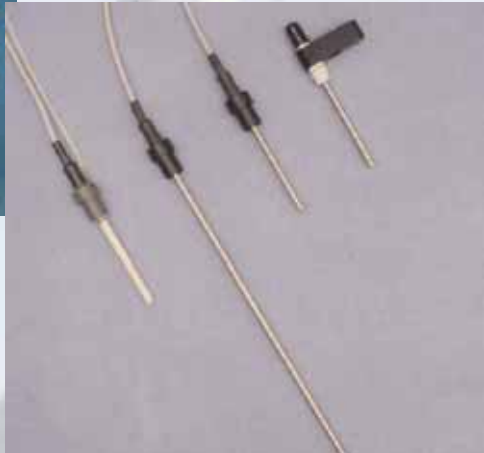
Full Range of Meteorological Sensors:



Rain detector 205



Radiation shields



PT Temp. Sensors



Pyranometers
(by Kipp & Zonen)

And much more....

Questions ?

Thanks for your attention

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Mierij Meteo is present at the EWEK 2007
From May 7th until May 11th in Milan
Booth no. G131

