CMMNO 14
International conference on
Condition Monitoring of Machinery
in Non-Stationary Operations

Dec. 15-16, 2014
Lyon, France

CMMNO'14 diagnosis contest

The aim of this contest is to make the most relevant diagnosis of a wind turbine operating under non-stationnary conditions. The information given hereafter, as well as the signal, have been kindly provided by **Maïa Eolis**. The first prize winner will be offered a 4 channels acquisition system by **OROS**, which is sponsoring this event.

The provided signal comes from an accelerometer located on the rotor side of the gearbox casing in the radial direction. The speed of the main shaft (supporting the blades) is between 13 and 15 rpm during the recording.

Two points will be more closely and objectively inspected by the jury:

- provision of the instantaneous speed of the high-speed shaft (carying gear #7) with an angular sampling, 8 samples by rotation, text format

- identification of the faulty rolling bearing   (BPFO / BPFI / BSF = 6.694/9.306/2.981 × the shaft frequency)

Here are the kinematic data of the gearbox:

gear	teeth
1	123
2 (3planets)	50
3	21
4	93
5	22
6	120
7	29
8	63
9	23
10	10
11	13
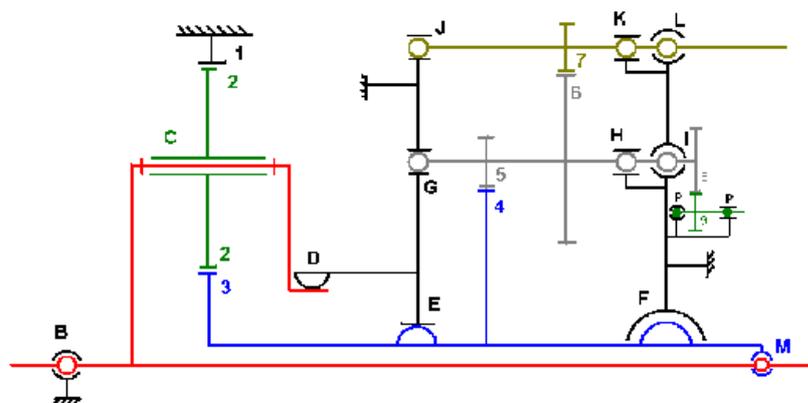
The signal can be freely obtained upon request by email at quentin.leclere@insa-lyon.fr

Your participation to the contest will be validated at reception of your report (6 pages max, including figures and tables, PDF format, to be sent at the same address), under the condition that you are registered to the CMMNO'14 congress. The deadline for sending your report is october 15th.