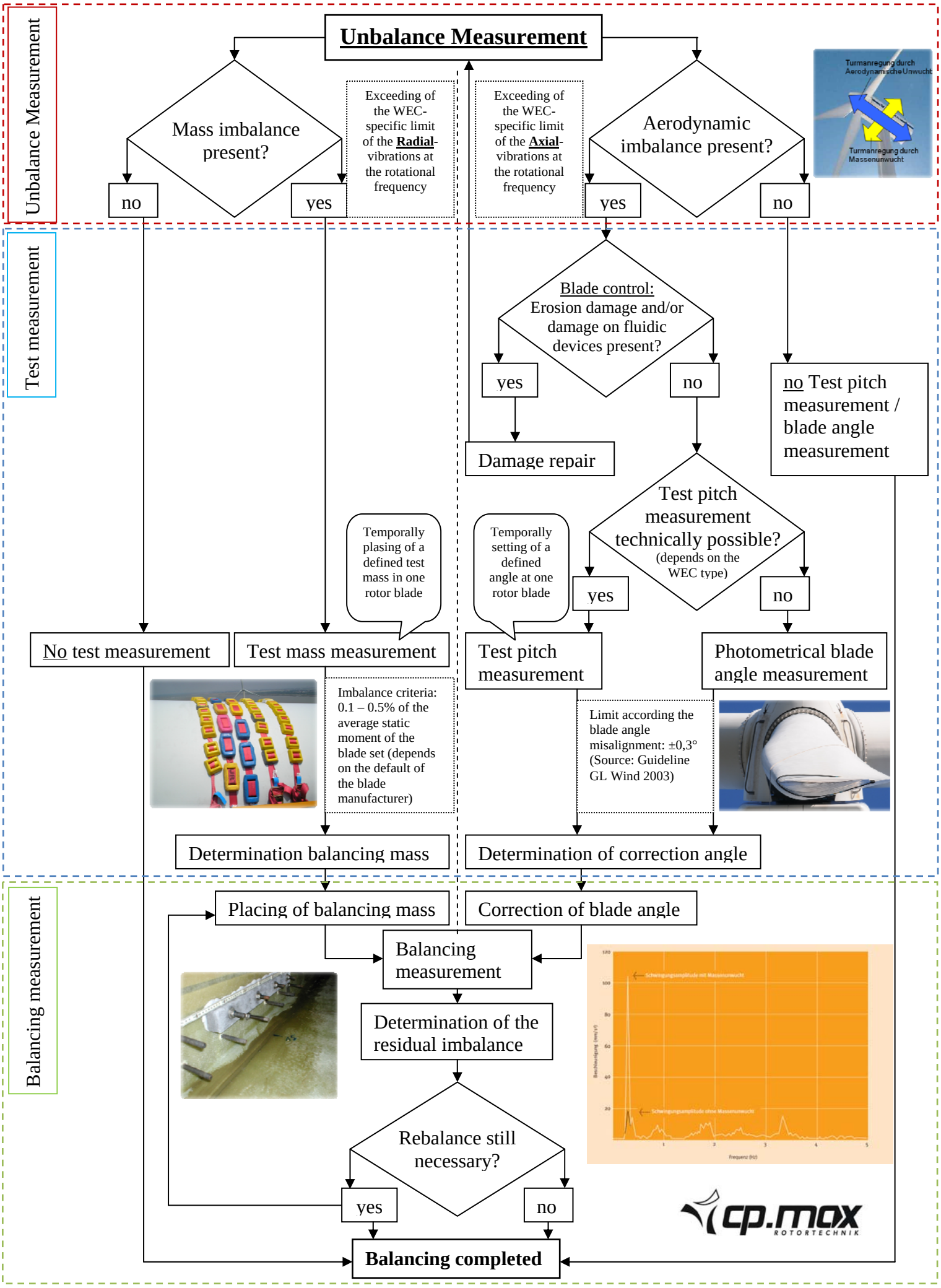
Unbalance Measurement
Unbalance Measurement
Mass imbalance present?
no
yes
Exceeding of the WEC-specific limit of the Radial-vibrations at the rotational frequency
Exceeding of the WEC-specific limit of the Axial-vibrations at the rotational frequency
Aerodynamic imbalance present?
yes
no
Turmanregung durch Aerodynamische Unwucht
Turmanregung durch Massenunwucht
Test measurement
Blade control: Erosion damage and/or damage on fluidic devices present?
yes
no
Damage repair
no Test pitch measurement / blade angle measurement
Test pitch measurement technically possible? (depends on the WEC type)
yes
no
Temporally plasing of a defined test mass in one rotor blade
Temporally setting of a defined angle at one rotor blade
No test measurement
Test mass measurement
Test pitch measurement
Photometrical blade angle measurement
Imbalance criteria: 0.1 – 0.5% of the average static moment of the blade set (depends on the default of the blade manufacturer)
Limit according the blade angle misalignment: ±0,3° (Source: Guideline GL Wind 2003)
Determination balancing mass
Determination of correction angle
Balancing measurement
Placing of balancing mass
Correction of blade angle
Balancing measurement
Determination of the residual imbalance
Rebalance still necessary?
yes
no
Balancing completed
cp.max ROTORTECHNIK