



### Note on Engineering Details

- No:** DWP-And-extern-0001, Rev. 0
- Title:** **Transition period for implementation of new guideline [2] regarding Site Specific Design Assessment**
- Ref.:**
- [1] "Regulations for the Certification of Wind Energy Conversion Systems", Germanischer Lloyd, Edition 1999
  - [2] "Guideline for the Certification of Wind Turbines", Germanischer Lloyd WindEnergie GmbH, Edition 2003 with Supplement 2004
  - [3] "Wind turbine generator systems – Part 1: Safety requirements", IEC 61400-1, Edition 2
  - [4] "IEC System for Conformity Testing and Certification of Wind Turbines – Rules and procedures", IEC WT01, 1<sup>st</sup> Edition 2001
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- Key Words:** Project Certification, onshore, Site Specific, transition period, Design Assessment

Due to the implementation of the new guideline of Germanischer Lloyd [2] a transition period was defined to substitute [1]. After the 1<sup>st</sup> of November 2005, the new guideline [2] has to be used for performing a Design Assessment for the whole wind turbine or components. Thus the GL regulation edition 1999 [1] will not be applied for designing of the wind turbine and not be stated on the Site Specific Statement of Compliance for the Design Assessment (SSSoCfDA) anymore.

In case the whole turbine to be installed at the site has been assessed acc. to [2], this guideline will be stated on the SSSoCfDA. This assessment can be done for the site only or within a generic Design Assessment.

Normally a SSSoCfDA is based on a generic Design Assessment, which has been assessed acc. to [1] and for the loads in some cases acc. to [3]. In the following different scenarios are described, how to get a SSSoCfDA after the 1<sup>st</sup> of November 2005:

1. Generic Design Assessment is based on IEC-Loads acc. to [3] and the rest acc. to [1]
  - 1.1 In case the IEC [3] class S loads at the site are lower compared to the design loads and no new components (not yet certified) have to be implemented, a SSSoCfDA specifying the IEC regulation [3] can be issued.
  - 1.2 In case the IEC [3] class S loads at the site are lower compared to the design loads and new components have to be implemented, these components have to be examined acc. to [2]. The assessment of these components will be stated in separate certification reports by referring to the new guideline [2]. The SSSoCfDA will only state the IEC regulation [3]. [2] will not be stated, because not the whole wind turbine has been examined acc. to [2].

1.3 In case the IEC [3] class S loads at the site are not covered by the design loads, the load exceedance has to be evaluated. In case of decisive exceedances a stress reserve evaluation of the affected component has to be done acc. to [2]. This will be necessary in case the load exceedance is decisive and the load component exceeded is design relevant. This normally means in consequence that the new guideline [2] has to be applied for the whole wind turbine. Low load exceedances may be within technical tolerance limits.

2. Generic Design Assessment is based on [1]

In case the generic Design Assessment is based on GL loads acc. to [1], the site specific loads have to be calculated acc. to [2]. If the loads are lower compared to the design loads, a letter of conformity can be issued, only stating that the loads have been calculated acc. to the new guideline [2]. In case of higher loads at the site and/or new components the remarks described above apply. In all cases a letter of conformity will be issued, as long as the whole wind turbine has not been assessed acc. to [2].

In general we would suggest renewing the generic Design Assessment acc. to [1] by applying [2]. Based on this no restrictions as described above exist for issuing a SSSoCfDA.

The most common scenarios are described. In case other scenarios not described above, please do not hesitate to contact the person mentioned above.

The note has to be observed for all documents to be handed in after the 31<sup>st</sup> of October 2005.

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