

## Note on Engineering Details

**No:** DWM-Schl-extern-006

**Title:** **Offshore Wind Turbine Certification, Manuals for Sea Transport and Offshore Installation**

**Ref.:** Germanischer Lloyd "Guideline for the Certification of Offshore Wind Turbines", Edition 2005, Section 1.2 and Section 9.1

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**Key Words:** installation, manual, erection, sea transport, offshore

- A. The GL Offshore Guideline (reference given in the headlines) requires in section 1.2.2.3.2(3) last bullet the assessment of the "erection manual" for **A- and B-Design Assessment**.
- B. However in section 1.2.3.5(1) the assessment of the "transport and installation manuals..." (see section 9.1)" is required for **Project Certification**.

Background of the requirement A ("erection manual") is that for A- and B-Design Assessment information on the offshore erection shall be made clear inside the certification process. On the other hand site specific offshore information like identification of the offshore site, arrangements of vessels, buoys, lights, etc. can only be given during the process of Project Certification as they might vary from site to site. Therefore the assessment of "transport and installation manual" is in requirement B defined inside the scope of Project Certification.

### Definition of "erection manual" as per requirement A:

A manual describing all offshore activities for erection and installation (see section 9.1), but leaving out site specific matters.

The following items may among others be part of the erection manual:

- tightening processes and torques of bolted connections
- alignment procedures of gearbox and/or generator (if applicable)
- connection of down conductors for the lightning protection
- air-tightness of nacelle (if applicable)
- corrosion protection
- attachment points
- general safety rules

Definition of "transport and installation manuals" as per requirement B:

Manuals that fulfil section 9.1 "Manuals for Sea Transport and Offshore Installation".

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