

풍력발전 표준화 동향 및 추진전략

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Standardization Trend and Propulsion Strategy of Wind Power Generation

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Abstract : Recent alarming acceleration of global warming has made power generations using renewable energy to be in the middle of the spotlight. Korean government has also announced that it will make the related industry to be nation's one of main export items with high investments to low carbon green growth industry. To achieve this goal of exporting the renewable energy power generation system beyond domestic use, internationally acceptable rules should be applied and the three step processes of design, performance assessment and certification should follow international standards. Corresponding this international requests, IEC(International Electrotechnical Commission) is conducting the establishment of rules in TC88 for technical requirements of wind turbines. Design life-time of a wind turbine is required to be at least 20 years. In the meantime, the wind turbine will experience a lot of load cases such as extreme loads and fatigue loads which will include several typhoons per year and extreme gusts with 50 years recurrence period as well as endless turbulence flow. Therefore, IEC 61400-1 specifies design load cases to be considered in the wind turbine design and requires the wind turbine to withstand the load cases in various operational situations. It thus appears that the examination of contents and decisions discussed in the international standard committee will help people in the field of offshore wind energy and ocean energy converters.