

Response to Reviewer 2 Comments

Thank you for your letter and the reviewer's suggestions on our manuscript. These suggestions are very helpful for our paper modification and improvement, and have a very important guidance basis for our research. We have carefully studied these guidelines and have carefully amended them, which we hope will be approved. The specific changes are explained as follows:

Point1: The derivation of Equation 4 to 5 is confusing.

Response 1: Thank you for your question. When formula (4) is transformed to the rotor rotation coordinate system, because $\omega_{s-r}=0$, Equation (4) can be simplified to Equation (5):

$$\mathbf{u}_r^r = \frac{L_m}{L_s} \frac{d\psi_s^r}{dt} + R_r \mathbf{i}_r^r + \left(\frac{L_r L_s - L_m^2}{L_s} \right) \frac{d\mathbf{i}_r^r}{dt} \quad (5)$$

Point2: The short circuit current calculation method is too cumbersome to express, and may be considered to be streamlined.

Response 2: Thank you to the reviewer for your suggestions. According to the guidance of the reviewer, the format of the article has been adjusted and some words have been adjusted to simplify the calculation of short-circuit current.

For example, 3 Short-circuit current calculation of DFIG group at fault steady-state time is adjusted as: 2.4 Short-circuit current calculation of DFIG group at fault steady-state time.

Point3: What specifically is the traditional methods?

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Response 3: Thanks to the question of the teacher, the traditional method is directly equivalent to the synchronous generator method or does not consider the transient process for short-circuit current calculation, this paper is based on the converter input-output external characteristics of the equivalent mathematical model of the converter, and further gives the doubler wind turbine transient model considering the influence of the converter control. The effect mechanism of low voltage crossing control strategy on short circuit current is analyzed.

I would like to pay tribute to the conscientious and responsible spirit of the reviewer. I will be more strict with myself to be concise and concise in the future scientific research. Thank you for your guidance!