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**LIU et al.**(10) **Pub. No.: US 2022/0360195 A1**(43) **Pub. Date: Nov. 10, 2022**(54) **VOLTAGE CONTROL METHOD AND SYSTEM**(71) Applicant: **ZHUZHOU CRRC TIMES ELECTRIC CO., LTD.**, Zhuzhou, Hunan (CN)(72) Inventors: **Kean LIU**, Zhuzhou, Hunan (CN); **Jing SHANG**, Zhuzhou, Hunan (CN); **Minggao ZENG**, Zhuzhou, Hunan (CN); **Qingliang ZHAO**, Zhuzhou, Hunan (CN); **Shaolong XU**, Zhuzhou, Hunan (CN); **Liangjie LIU**, Zhuzhou, Hunan (CN); **Weiwei GAN**, Zhuzhou, Hunan (CN); **Wei GUO**, Zhuzhou, Hunan (CN); **Fang YUAN**, Zhuzhou, Hunan (CN); **Chaoyong LIN**, Zhuzhou, Hunan (CN); **Xuebiao PENG**, Zhuzhou, Hunan (CN); **Jinwei MO**, Zhuzhou, Hunan (CN); **Gengliang HE**, Zhuzhou, Hunan (CN); **Lifen YANG**, Zhuzhou, Hunan (CN); **Leilei DING**, Zhuzhou, Hunan (CN); **Bingzhang LI**, Zhuzhou, Hunan (CN); **Qiao HE**, Zhuzhou, Hunan (CN); **Chao DU**, Zhuzhou, Hunan (CN); **Hao LI**, Zhuzhou, Hunan (CN)(73) Assignee: **ZHUZHOU CRRC TIMES ELECTRIC CO., LTD.**, Zhuzhou, Hunan (CN)(21) Appl. No.: **17/775,885**(22) PCT Filed: **Nov. 21, 2019**(86) PCT No.: **PCT/CN2019/119850**

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**ABSTRACT**

Provided are a method and system for controlling a voltage. The method includes: acquiring a current output voltage of an inverter; calculating a current voltage error of the current output voltage relative to a given output voltage; inputting the current voltage error into a fuzzy controller to determine a target output voltage of the inverter; determining an amplitude adjustment command based on a difference between an amplitude of the target output voltage and an amplitude of the current output voltage; determining a phase adjustment command based on a difference between a phase of the target output voltage and a phase of the current output voltage; and adjusting an amplitude and a phase of an output voltage of the inverter according to the amplitude adjustment command and the phase adjustment command respectively, to maintain the output voltage of the inverter within a preset range.

