**Claim rejection under 35 USC 112**

**The following is a quotation of the first paragraph of 35 U.S.C. 112(a):**

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilledin the art to which it pertains,or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplatedby the inventor or joint inventor of carrying out the invention.

**The following is a quotation of 35 U.S.C. 112(b):**

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctlyclaiming the subject matter which the inventor or a joint inventor regards as the invention.  
The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA),second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

**Claim rejection under 35 USC 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(a)(1) the claimed invention was patented, described in a printed publication, orin public use, on sale or otherwise available to the public before the effectivefiling date of the claimed invention.

**Claims 1-19 are rejected under 35 U.S.C. 102(a)(1) as being anticipated by XXXXX et al (US )**

Claim rejection under 35 USC 103

**The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:**

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this titleif the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimedinvention to a person having ordinary skill in the art to which the claimed invention pertains.Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103 as being unpatentable over XXXXXXX (US 20160142003) in view of XXXXXXX. (US ).

**Regarding claim 1**. A motor control system, comprising:  
a motor comprising a plurality of motor windings; and a plurality of electric control units electrically connected with the motor, each of the electric control units comprising an inverter configured to receive direct current (DC) voltage and output alternating current (AC) voltage to the motor windings to control the motor, wherein at least one of the electric control units comprises:  
a DC bus connected to a power source;  
first switches, each of the first switches connected with a respective one of the motor windings;  
second switches, each of the second switches connected with the DC bus and a respective one of the motor windings, wherein each of the second switches is paired with a respective one of the first switches;  
a first switch driver configured to generate drive signals to drive the first and second switches;  
first resistors, each of the first resistors connected between the DC bus and a respective one of the second switches.   
   
**Regarding claim 2**. The system of claim 1, wherein the DC bus is configured to supply voltage to the second switches through the first resistors, each of the first resistors connected between the DC bus and a respective one of the second switches, so that the second switches short the motor windings in a state that the first switch driver does not generate the drive signals.   
   
**Regarding claim 3**. The system of claim 2, wherein the first switch driver is configured to generate one or more of the drive signals that control the second switches not to short the motor windings.   
   
**Regarding claim 4**. The system of claim 1, wherein the first resistors are configured to pull up the voltage supplied to the second switches by the DC bus.   
   
**Regarding claim 5**. The system of claim 1, wherein the DC bus is configured to turn on the second switches by supplying voltage, pulled up by the first resistors, to the second switches to short the motor windings in a state that the first switch driver does not generate the drive signals.   
   
**Regarding claim 6**. The system of claim I, wherein the at least one of the electric control units further comprises second resistors, wherein each of the second resistors having greater resistance than the first resistors is connected with a respective one of the second switches so that one or more of the drive signals of the first switch driver input to the second switches cause the second switches not to short the motor windings.   
   
**Regarding claim 7**. The system of claim I, wherein the at least one of the electric control units further comprises:  
third switches, each of the third switches connected between a respective one of the motor windings and a point between the paired first and second switches; and a second switch driver configured to control the third switches to selectively connect or disconnect the at least one of the electric control units with the motor windings.   
   
**Regarding claim 8**. The system of claim 1, wherein:  
the DC bus has first and second nodes, one of the second switches has:  
a first terminal connected with one of the first switches, one of the motor windings and one of the first resistors connected to the first node of the DC bus;  
a second terminal configured to receive one of the drive signals of the first switch driver; and  
a third terminal connected with the second node of the DC bus,  
 one of the first resistors is connected between the first node of the DC bus and the first terminal of the one of the second switches.   
   
**Regarding claim 9**. The system of claim 8, wherein the second switches are configured to be turned on by voltage of the DC bus supplied through the first resistors so that the second switches short the motor windings to the second node of the DC bus in a state that the first switch driver does not generate the drive signals.   
   
**Regarding claim 10**. The system of claim 8, wherein the at least one of the electric control units further comprises second resistors, wherein one of the second resistors having greater resistance than the first resistors is connected between the second and third terminals of the one of the second switches.   
   
**Regarding claim 11**. The system of claim I, wherein:  
the DC bus has first and second nodes, one of the first switches has:  
a first terminal connected with the first node of the DC bus;  
a second terminal configured to receive one of the drive signals of the first switch driver; and  
a third terminal connected with one of the second switches and one of the motor windings,  
 the one of the second switches has:  
a first terminal connected with the one of the first switches and the one of the motor windings;  
a second terminal configured to receive another of the drive signals of the first switch driver; and  
a third terminal connected with the second node of the DC bus, and  
 one of the first resistors is connected between the first node of the DC bus and the second terminal of the one of the second switches.   
   
**Regarding claim 12**. The system of claim 11, wherein the at least one of the electric control units further comprises second resistors, wherein one of the second resistors having greater resistance than the first resistors is connected between the second and third terminals of the one of the second switches.   
   
**Regarding claim 13**. The system of claim 11, wherein the at least one of the electric control units further comprises:  
third switches, one of the third switches connected between the one of the motor windings and a point between the one of the first switches and the one of the second switches; and a second switch driver configured to control the third switches to selectively connect or disconnect the at least one of the electric control units with the motor windings.   
   
**Regarding claim 14**. The system of claim 1, wherein:  
the DC bus is configured to supply voltage to the second switches through the first resistors, each of the first resistors connected between the DC bus and a respective one of the second switches, to turn on the second switches so that the second switches short the motor windings in a state that the first switch driver does not generate the drive signals, and the first switch driver is configured to generate one or more of the drive signals that turn off the second switches not to short the motor windings.   
   
**Regarding claim 15**. The system of claim 1, wherein the DC bus is configured to, when ail of the electric control units are disabled, supply voltage to the second switches of the at least one of the electric control units through the first resistors so that the second switches of the at least one of the electric control units short the motor windings.   
   
**Regarding claim 16**. A motor control system, comprising:  
a motor comprising a plurality of motor windings; and a plurality of electric control units electrically connected with the motor, each of the electric control units comprising an inverter configured to receive direct current (DC) voltage and output alternating current (AC) voltage to the motor windings to control the motor, wherein at least one of the electric control units comprises:  
a DC bus connected to a power source, the DC bus having first and second nodes;  
a first switch driver configured to generate drive signals to drive first and second switches;  
the first switches, one of the first switches having a first terminal connected with the first node of the DC bus, a second terminal configured to receive one of the drive signals of the first switch driver, and a third terminal connected with one of the second switches and one of the motor windings;  
the second switches, the one of the second switches having a first terminal connected with the one of the first switches and the one of the motor windings, a second terminal configured to receive another of the drive signals of the first switch driver, and a third terminal connected with the second node of the DC bus, and  
the first resistors, the one of the first resistors connected between the first node of the DC bus and the second terminal of the one of the second switches.   
   
**Regarding claim 17**. The system of claim 16, wherein the second switches are configured to be turned on by voltage of the DC bus supplied through the first resistors so that the second switches short the motor windings to the second node of the DC bus in a state that the first switch driver does not generate the drive signals.   
   
**Regarding claim 18**. The system of claim 16, wherein the first resistors are configured to pull up the voltage supplied to the second switches by the DC bus.   
   
**Regarding claim 19**. The system of claim 16, wherein:  
the at least one of the electric control units further comprises second resistors, wherein one of the second resistors having greater resistance than the first resistors is connected between the second and third terminals of the one of the second switches, and the first switch driver is configured to output, to the second switches, one or more of the drive signals that control the second switches not to short the motor windings.   
   
**Regarding claim 20**. The system of claim 16, wherein the at least one of the electric control units further comprises:  
third switches, one of the third switches connected between the one of the motor windings and a point between the third terminal of the one of the first switches and the first terminal of the one of the second switches; and a second switch driver configured to control the third switches to selectively connect or disconnect the at least one of the electric control units with the motor windings.