CLAIMS

1. A process for connecting two or more permanent magnet motors each having a rotor and a stator in series for an electrical submersible pump comprising:

making a phase alignment mark on each stator of the two or more motors to be connected;

making a pole identifying mark on each rotor of the two or more motors to be connected;

using the phase alignment marks to align the phases of the stators; and

using the pole identifying marks to align the poles of the rotors,

wherein the phase alignment mark on each stator is formed on exterior surface of each stator.

2. The process of claim 1, wherein the process further comprises starting a winding on each stator at the phase alignment mark.

3. The process of claim 1, wherein each phase alignment mark comprises a mark machined onto each stator.

4. The process of claim 1, wherein each phase alignment mark comprises a mark painted onto each stator.

5. The process of claim 1, wherein each phase alignment mark comprises a mark adhered onto each stator.

6. The process of claim 1, wherein the process further comprises installing each stator in a motor housing and indicating a location of each phase alignment mark on an exterior of each motor housing.

7. The process of claim 1, wherein each pole identifying mark comprises a mark machined onto each rotor.

8. The process of claim 1, wherein each pole identifying mark comprises a mark painted onto each rotor.

9. The process of claim 1, wherein each pole identifying mark comprises a mark adhered onto each rotor.

10. The process of claim 1, wherein each pole identifying mark comprises a notch on an end of a rotor shaft of each rotor wherein the notch is configured to align with a coupling alignment notch.

11. An electric motor for an electric submersible pump comprising:

a first permanent magnet electric motor comprising a first rotor with a first pole identifying mark and a first stator with a first phase alignment mark;

a second permanent magnet electric motor comprising a second rotor with a second pole identifying mark and a second stator with a second phase alignment mark;

wherein the phases of the first and second stators are substantially aligned and wherein the poles of the first and second rotor are substantially aligned,

wherein the phase alignment mark on each stator is formed on exterior surface of each stator.

12. The electric motor of claim 11, wherein the first permanent magnet motor comprises threads on an inner diameter which turn in a first direction and wherein second permanent magnet motor comprises threads on an inner diameter which turn in a second direction,

the electric motor further comprising a single-piece housing coupling comprising a first end and a second end, the first end of the single-piece housing coupling comprising threads on an outer diameter which turn in a first direction, the second end of the single-piece housing coupling comprising threads on an outer diameter which turn in a second direction,

wherein the first permanent magnet motor is joined to the second permanent magnet electric motor using the threads on the single-piece housing coupling, the threads on the first permanent magnet motor, and the threads on the second permanent magnet motor.

13. The electric motor of claim 11, further comprising the first stator installed in a first motor housing and the second stator installed in a second motor housing wherein an exterior of each of the first and second motor housings indicates the location of the first and second phase alignment mark.

14. The electric motor of claim 11, wherein the first and second permanent magnet electric motors are configured to be driven with a variable speed drive of less than 800 volts.

15. The electric motor of claim 11, wherein each of the first and second permanent magnet motors comprises from 2-20 poles.

16. The electric motor of claim 11, wherein each of the first and second pole identifying marks comprises a mark machined onto the first and second rotors.

17. The electric motor of claim 11, wherein each of the first and second pole identifying marks comprises a mark painted onto the first and second rotors.

18. The electric motor of claim 11, wherein each of the first and second pole identifying marks comprises a mark adhered onto the first and second rotors.

19. The electric motor of claim 11, wherein each of the first and second pole identifying marks comprises a notch on an end of a rotor shaft of each of the first and second rotors wherein the notch is configured to align a coupling alignment notch.

20. The electric motor of claim 11, wherein each of the first and second rotors comprises a solid steel bar rotor.

21. An electric submersible pump comprising:

a power module comprising a first permanent magnet electric motor comprising a first rotor with a first pole identifying mark and a first stator with a first phase alignment mark and

a second permanent magnet electric motor comprising a second rotor with a second pole identifying mark and a second stator with a second phase alignment mark, wherein the phases of the first and second stators are substantially aligned and wherein the poles of the first and second rotors are substantially aligned;

a head module; and

a base module,

wherein the phase alignment mark on each stator is formed on exterior surface of each stator.