Lottie Image Description:

Alex (Global Test):

Alex works on design tests to ensure drives are safe and operational before shipping them to customers. She also makes sure processes in the factory are working as they should to ensure this.

* Lottie with Alex in her AC regen test rig (pictures 1,2, 13 and 14)
  + This helps the factory save energy and help the environment by recycling energy rather than wasting it.
* Lottie testing a Frame 12 in the factory (picture 4 and 5)
  + All products are thoroughly tested before reaching a customer.
* Lottie inside a Frame 12 ready to be tested (picture 5 and 6)
* Reading a manual before working on a drive (8 – 10)

Kitty (PCB Design):

Kitty designs where the components will go on the PCB (printed circuit board) so that the drive will work as expected. This means considering EMC (electromagnetic compatibility) and manufacturing concerns.

* Lottie lays out the PCB (this is just a test circuit so doesn’t show any protected IP)- she puts the components where they should go. (pictures 1,2,3 and 4)
* The SMT machine places the components where lottie put them (videos 1 and 2, pictures 3, 6, 7)
* Lottie inspects the finished board with Kitty to ensure everything looks as expected before passing them to the quality department for closer inspection (pictures 5,8,9)

Erin (Thermal Testing):

Erin designs the electronics in the drive. Electronics control small amounts of electricity in complex ways. Some electronics circuits in the drive include things like the control and display circuits.

* Lottie in a heat chamber that tests how the drive will perform at its thermal limits.
* Heat Chamber Method:

1. Set up the drive in the heat chamber (connect to CONNECT and do a quick test run)
2. Set the temperature of the heat chamber and wait for it to get hot (this can take some time)
3. Run the drive tests (multiple times to be sure)

Nika (Power Electronic Testing):

Nika designs the power electronics in the drive. Power electronics control large amounts of electricity. Some power electronics circuits in the drive include the inverter and rectifier as well as feedback circuits which tell the electronics how the drive is operating. Safety is very important in Nikas role especially as she works with potentially dangerous amounts of electricity.

* Lottie writes some test code (picture 3 and 0)
* Lottie checks over the PCB before testing (picture 1)
* She helps Nika setup a Frame 12 for testing (picture 2 and 9)
* She works with the oscilloscope to detect errors.
  + She uses the probe (picture 5) which connects to the drive and is how the test current flows to the oscilloscope. Make sure the scope is isolated so there is no risk of electric shock.
  + Then she looks at the output waveforms (pictures 7,8, 10, 11) and uses her engineering knowledge to see if they are what she would expect.
* She uses a power supply to power the drive (picture 6)