Working principles in general:

The eddy current detection is to put the conductor close to the coil with alternating current, and the alternating magnetic field is established by the coil. The alternating magnetic field passes through the conductor and generates electromagnetic induction with it to establish an eddy current in the conductor.

The eddy current in the conductor will also produce its own magnetic field, and the action of the eddy current magnetic field will also change the strength of the original magnetic field, which will lead to the change of the voltage and impedance of the coil. When the structure and hardness of the conductor change, it will affect the strength and distribution of the eddy current. The change of the eddy current in turn causes the change of the voltage and impedance of the detection coil. According to this change, it will know whether the defects in the conductor and the properties of the metal material have changed.

What standards does the machine refer to：

EN ISO 15549	Non-destructive testing, general theory of eddy current testing.
EN ISO 15548-1	Nondestructive testing, eddy current testing equipment part 1, instrument characteristics and verification.
EN ISO 15548-2	Nondestructive testing, eddy current testing equipment part 2, probe characteristics and verification.
EN ISO 15548-3	Nondestructive testing, eddy current testing equipment part 3, system characteristics and verification.

How to verify the machine :

（4）Select the appropriate parameters and click the back to origin button （center button) press more place the box in centre position . Take 15-20 qualified workpieces to be detected by the sensor, take their qualified waveform trajectory figure, and click the calibration button .
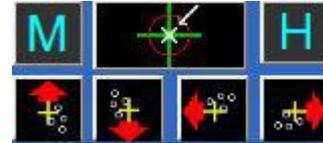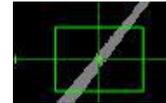
（5）Put the unqualified workpieces, observe the differences between the trajectory figure and the calibration trajectory figure, and determine the location of the box of Win1 and Win2 reasonably according to the size of the difference.Circle the box at the most obvious difference, if the difference is large, also can circle one of WIN1 and win2. The circle position depends on the actual figure.

（6）Under testing(test) status can work normally 。

（7）Parameters on the right side of the interface tolerance choose，depend on the differences．Chosen according to the size of the figure differences between the qualified parts and the unqualified parts. If the difference is small then adjust a little, if the difference is large then adjust a lot. It needs to be adjusted appropriately, and the user can set it according to the process requirements. The reference value is generally set as 0.85-0.90.

（8）Press the count clear button ，open the automatic sorting，start batch sorting detection.