

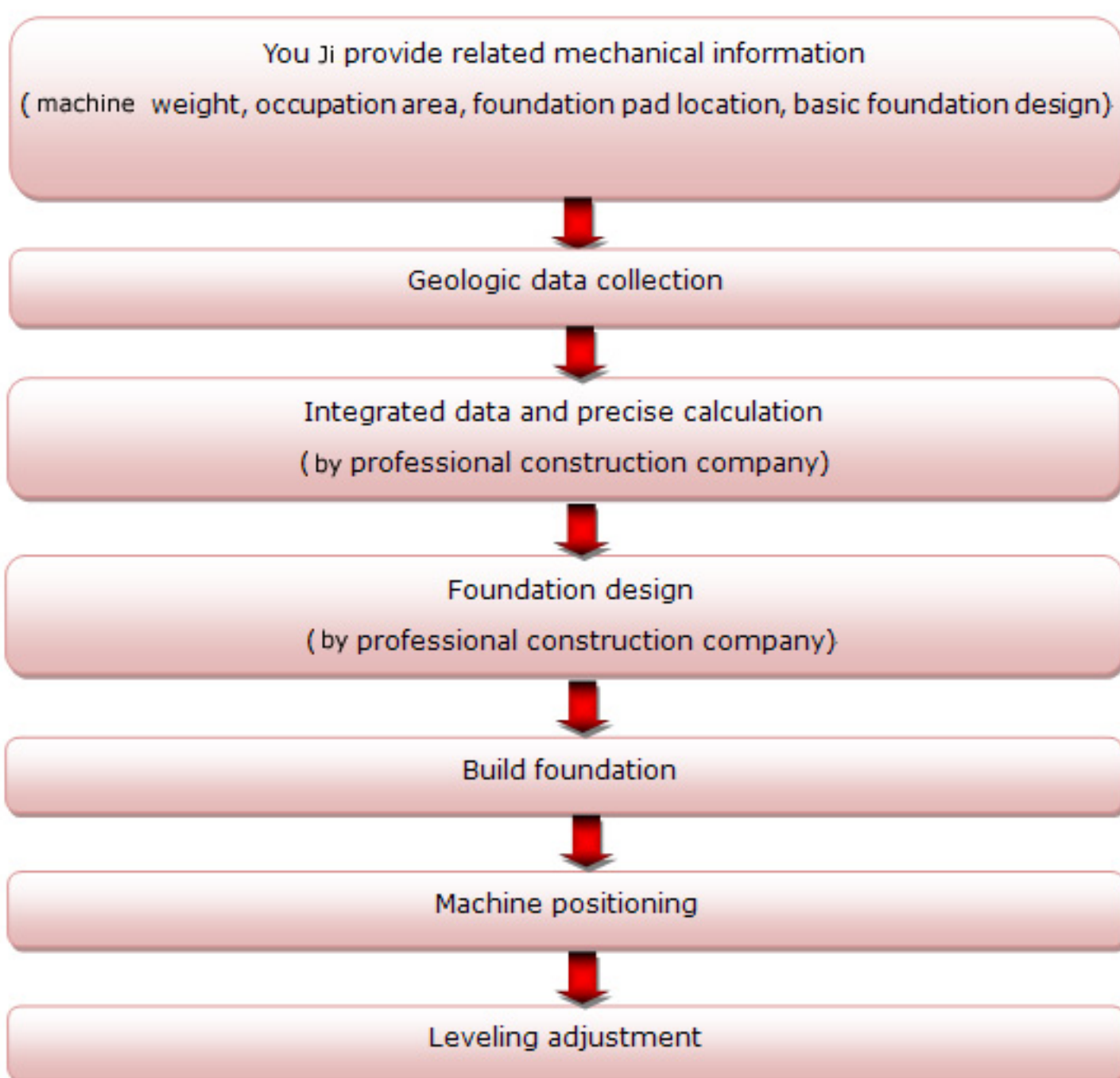
Cooperation projects-Foundation design technique

The machining accuracy of machine tools relies on high rigidity structure, well-planned design and foundation construction. As for the machines with smaller span, the machine rigidity isn't influence by the foundation. However, it is difficulty to ensure the machine rigidity on the machines with bigger span. The foundation design and soil condition must be taken into consideration, too. Thus we can say that machine structure, foundation and soil condition are three major factors to perform machining accuracy, especially the machines with bigger span. Even we can view the foundation of huge machine tools as part of the machine base.

It is unable to set up the standard foundation mode due to the machine installation is situated in different places of various geological conditions. In overseas countries, this kind integrated service can be provided by the professional construction company. On the contrary, there are a few suppliers in Taiwan and they usually charge higher cost. Normally, machine manufacturers provide the drawings showing the foundation and the location of foundation pads. The Construction contractors build the foundation according to the machine manufacturer's drawings and they choose the suitable reinforcing bar, binding forms and concrete according to their experience. Therefore, the stability and quality of foundation can't be well-controlled.

In order to strengthen the concept of foundation design, You Ji cooperates with local Kun Shan university to research and develop the foundation construction on various huge machines. By means of this cooperation with Kun Shan university, You Ji will build the system of basic machine foundation structure, basic design, mechanical structure, dynamic & static finite element analysis, dynamic & static mode of foundation and soil combination. Above-mentioned knowledge also includes foundation occupation area, reinforcing bar quantity and specification, binding method, cement type and so on. It provides the customer a standard operation procedure and recommendation on foundation construction.

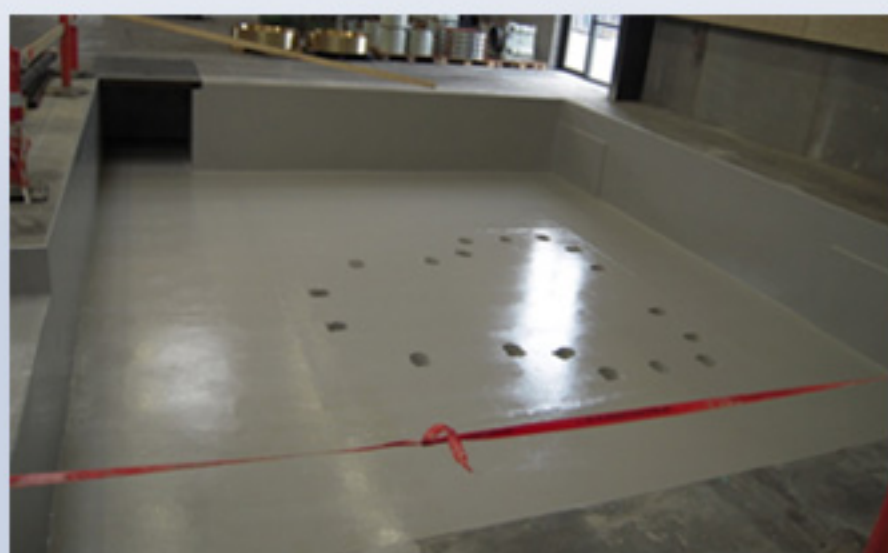
Standard operation procedures:



The overall structure of the foundation will be created with the stress and deformation of geological changes. The geological changes are partly attributed to the vibration during machining process. Therefore, in order to maintain a stable foundation and high accuracy machining performance, the foundation re-alignment is essential to carry out per half year after initial installation and once a year.



YV1200 Reinforcing bar binding inspection for foundation pit



VTL2500 Floor type foundation layout



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