Generally, the shape accuracy of the product or the dimensional accuracy is used as a "measure" of die accuracy. Products that require very strict tolerances, for example, lead frames or IC connectors, etc., are products that require very high accuracy, and dies for producing these are recognized as the high accuracy dies. This is a point which with no body's question.

Now let us consider where this high accuracy is found in such dies. Since the shapes of punches and dies are transferred to the products, the shapes of punches and dies are produced with high accuracy using multiple cutting and other methods employing profile grinding machining (PG machining) or wire electric discharge machining (W/EDM). Definitely one factor in judging die accuracy is the preparation of the shapes of punches and dies corresponding to the dimensional tolerances of the product.

The preparation of the shapes of punches and dies may also be necessary for maintaining clearances. As the material plate thickness of products becomes smaller, the removal clearance also becomes proportionately smaller. It is very difficult to maintain this uniformly. Therefore, even if the tolerance of the shape and dimensions of the product are big, because small clearances have to be maintained in the case of forming products from thin plates, it is necessary to maintain high accuracy when preparing punches and dies and the assembling position inside the die. It is also possible to say that even the plate material thickness is a "measure" for evaluating the accuracy of the die. Even the accuracy of the shape of products becomes bad with a small change in the mating if the plate thickness of the material becomes small. Of course, the preparation of the shapes of punches and dies becomes important.

Through the preparation of the shapes of the punches and dies, it is possible to obtain satisfactory parts. Since punches and dies are placed as a top die and bottom die, even the guide posts and bushes (guides) that determine the accuracy of the relationship between the top die and bottom die have very important indirect roles in the die accuracy. Considering that a punch is made into a punch guide using a stripper, this is also related to the preparation of the stripper (inner guide), the stripper bolt, spring, and so on.

It is not possible to discuss the accuracy of a die without clarifying what is to be the "measure" of accuracy.
For example, one can think of how the inner guide should be. Depending on the accuracy required, even the part used and the method of assembling become different. A die that is prepared without clarifying the details of what is required, even if it looks like a real die, cannot be said to be a high accuracy die.

It is easy to understand once the preconditions have been made clear. For example, if a die is considered with the precondition that a thin material is to be formed, how the die should be formed becomes clear from following the thinking sequence of - small clearance → shape accuracy and surface roughness of punches and dies → die position accuracy → guide preparation.

The accuracy of a die can be said to be determined by the product irrespective of the number of formations of the product that is produced by press formation.