Information Sheet 1

GOALS IN MEASUREMENT ("PART")

Precision, Accuracy, Reliability, Tolerance. These are words that are used much more frequently in a machine shop than in a cabinet shop or on a building site. Many people think it is unnecessary for woodworkers to think of such things because wood swells shrinks, warps and twists, and "many people think" that "close enough" is good enough. This idea is used as an excuse by anyone who lacks either the skill or the knowledge to do woodworking the way it should be done: with precision, accuracy, reliability, and tolerance. One of the goals every woodworker should strive for is to do every job with those words in mind.

P   Precision, as used here, refers to fineness of the measuring units used. This can vary depending on the type of work. Carpenters doing rough work may be allowed a tolerance of 1/8" on either side of the specified measurement. A woodworker, on the other hand, producing a number of parts that must fit together tightly and smoothly with no gaps, might have to measure and cut pieces with a tolerance of as little as 1/64". The general standard for most cabinet work is 1/64". To meet this standard you must learn to read your measuring tools very carefully, or with precision.

A   The term accuracy refers to the system of measurement used. To do accurate work, the woodworker must be sure his/her tools are true and match the standard which they represent. For instance, a 6" square must be exactly 90°, or the woodworker will not be accurate even though he/she is careful to be very precise in the use of the square.

R   Reliability is the ability to consistently produce precise and accurate work. It is an essential quality for skilled workers in any trade. Reliability is achieved through constant attention to specification and by checking and re-checking measurements.

The starting point for becoming a skilled woodworker is acquiring the habits of precision, accuracy, and reliability in measurement and layout

T   Tolerance refers to the amount of error allowed