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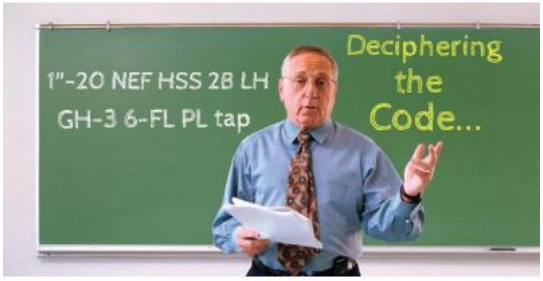
Tap Description - Deciphering the Code…

Many people will first be exposed to threading tool features in the form of a quote request, or order, from a customer. Example: Please quote 6 pieces of a 1"-20 NEF HSS 2B LH GH-3 6-FL PL tap.



Dissected, the customer has defined this tap as one with a "major" or "outside diameter" measuring 1 inch, with 20 threads per inch.

NEF, or National Extra Fine, is a thread-form symbol that refers to a National Standard for this combination of diameter and threads per inch (TPI). Others are UNC (National Coarse), UNF (National Fine), and UNS (National Special). These are Unified 60-degree thread forms. If the description is for another form, like Acme, Trapezoidal, or Buttress, to name a few, it would be shown in place of NEF.

HSS refers to the material composition of the tap. (HSS for High-Speed Steel or HSSE for Premium Steel) If the taps are Carbide, they should be marked as such.

2B is a reference to Class of Fit. - 2B applies to "internal" thread, like seen in a nut. 2A would refer to the same Class, but "external" thread, as seen on a bolt or screw. Additional classes, and designations, can be found in the Engineering Section of our website. (www.natool.com/engineering-data)

LH refers to Left-Hand thread. Right-hand thread is most common, and rarely referenced in the description.

GH3, sometimes shortened to H-3, applies a measurement of "Pitch-diameter". GH is short for "Ground High". "3" is number of 0.0005 increments applied over "basic" tap pitch diameter defined by the Class-of-Fit assigned. Pitch-diameter adjustments fine-tune the fit with the mating part. Occasionally, you may see GL instead of GH. GL means "Ground Low".

6-FL to identify the number of flutes (longitudinal, or spiral channels to form cutting edges, and allow room for evacuation of chips created as the tap cuts). SPFL indicates a spiral-fluted tool. SPPT following the number of flutes would indicate spiral-point.

PL refers to the length of chamfer. In this case, a Plug chamfer of 3-5 threads. Other common markers might include BT (Bottoming chamfer of 1-2 threads), MB (modified-bottoming of 2-2.5 threads, also commonly referred to a semi-bottoming) and TPR (Taper chamfer of 7-10 threads).

For a visual on the basics provided above, please refer to the Engineering Section of the North American Tool website (www.natool.com) under Identifying Taps.

Additional information provided in a description may also include the need for a surface treatment, or coating, or a specific geometry for cutting edge or flutes. Extended length to suit the application may also be noted. If additional information provided does not fit the common ones described above, please share it with North American Tool. The experts here can interpret the information to assign it's importance to the completion of the finished tool as quoted, or ordered. *Be aware that all of the details of the description provided may not be marked on the finished tap, usually because of space constraints on the shank of the tool.

Important pieces of information including; Material being tapped, depth of thread being produced, and type of hole (through or blind) being tapped, may also be included in the description. If these details are not included, the questions should be asked. This information will go a long way towards providing the customer with a tool applicable to the job at hand.