

Why Coil Stock?



Before discussing the intricacies of proper application and use of coil handling equipment, it may be useful to review why we have chosen or are about to choose coil stock as the raw material for our stamping, shearing, forming, or processing application.

From the standpoint of pressworking alone, it becomes obvious that few areas of manufacturing are advancing more rapidly in modern techniques than the metal stamping industry. Faster, heavier and more sophisticated operations are being introduced every day. It becomes necessary to support such capabilities with appropriate material input and removal techniques. The ability to operate at high speeds with a modern press, or to perform intricate and precisely accurate operations in a sophisticated die, is useless without complementary speed and accuracy capabilities in delivering material to and from the press. Neither does it help to apply such press and die capabilities for short intervals, only to have them interrupted for prolonged loading, threading, and material removal processes or because the fatigue factor has impaired manual operations.

A coordinated and conscientious press operator can probably hand feed strip stock to a simple blanking operation at speeds up to 50 strokes per minute. The best can even nest circular parts across that strip with minimal distance between, and relatively efficient scrap control, at comparable speeds. But, how long can such hand feeding be sustained? In a mere 20 or 30 minutes the best operator's rate begins to decline. Within 2 or 3 hours it is apt to be half the optimum rate. By a full shift it has probably tailed off even more. An automatically fed coil system maintains its optimum rate hour after hour, shift after shift. In a hand fed operation, the ability to sustain accuracy also deteriorates. In time, scrap parts begin to show up, followed by excessive waste in the scrap skeleton as the operator overcompensates for the inability to maintain accuracy. Obviously, die damage frequently results. The automatic coil feeding system consistently positions the material with accuracy, stroke after stroke.

Often overlooked is the fundamental fact that automatic feeding enables the press to be run continuously. Not only does a higher production rate result, but the press operates in the mode for which it was intended, with less wear and more

efficiency. The continuous mode of running a press does not affect the machine drive train and clutch/brake system as does the intermittent mode of running. These considerations can be applied to short run or low speed operations, as well as the more obvious long run and high production operations. The very cost of the material becomes a key consideration in choosing coil stock over hand fed strips or blanks. Coil stock is considerably less expensive per pound because it has not undergone the secondary cut-to-length or blanking operations. That is to say nothing of the money to be saved in scrap reduction. A better yield of parts can be obtained from coil stock not only because of the practical elimination of strip ends, but because of the more efficient nesting of many parts which can be achieved with attention to slitting widths and the inherent accuracy of the automatic feed.

With coil stock there are fewer sizes with which to be concerned when specifying the material. Strip length does not become a factor in determining an efficient size, so that ordering variations and storage space can often be reduced. Many stampers introduce in-house slitting or cut-to-length capabilities to further maximize the versatility of coil. Coil stock is often more readily available because of not having to undergo the custom cutoff operation. This consideration can help reduce inventory requirements as well as enable quicker response to customer demands.

Not the least to be said for automatically fed coil stock operations is the benefit of keeping the operator away from the point of operation during the metal stamping, cutting, or forming process. While many advances have been made in safeguarding personnel during hand fed operations, none can truly substitute for removing them from the point of operations, nor can they compete with the speed, accuracy, and consistency of a coil fed process.

In summary, we think of using coil for many reasons:

- To support modern technological capabilities**
- To deliver sustained speed of production**
- To enable continuous press runs**
- To reduce material costs**
- To reduce scrap costs**
- To reduce storage space**
- To increase operating versatility**
- To enhance material availability**
- To remove the operator from point of operation**
- To improve the profitability of today's metal stamper**

