## **BUYING YOUR NEXT IRONWORKER**

"Like the computer, most machine tools purchased today are literally obsolete tomorrow," says Robert Loiello of CanSaw Ltd., a Burlington, Ontario distributor of fabrication machinery. New developments in technology are ever changing today's methods of manufacturing.

However, it is comforting to know that there is at least one machine tool that will never become obsolete. "The Ironworker" is built to be the workhorse of any shop. The Ironworker does not require special training or skills to operate, it simply punches holes, shears steel plate, lops off angle iron and round or square bar, and (probably the most versatile function) notches.

Machine shops, steel fabricators, iron works and maintenance departments can benefit from the Ironworker's versatility. Generally, holes punched with an ironworker are rounder and more concentric than a drilled hole. Steel plate can be sheared virtually distortion free. Angle iron can be sheared or notched to close tolerances without a burr. Round bar, extremely difficult to part with conventional methods such as sawing, can be sheared with ease.



**EDWARDS** 



**UNI HYDRO** 

When time is important, there are very few machine tools in the same price range which can cut a 6" x 6" x  $\frac{1}{2}$ " angle iron in less than three seconds or punch a 1- $\frac{1}{4}$ " hole in 1" plate in less than 4 seconds. The ability to notch a corner off of a steel plate in less than two seconds as opposed to grinding for 2 minutes on a belt grinder is priceless. All are standard fare for a 100-Ton Ironworker. A rule of thumb would be to use an 8 : 1 ratio when costing jobs compared to conventional methods such as sawing or drilling. When in the market for an Ironworker a few points to consider are;





HMI

**SPARTAN** 

**FLOOR SPACE:** Ironworkers come in all shapes and sizes. Some manufacturers prefer to have workstations side by side, others prefer stations placed top to bottom to conserve floor space.

**POWER:** Mechanical ironworkers are extremely fast, hydraulic ironworkers although slower are much more economical and much easier on tooling such as punches and dies.

**CAPACITY:** Ironworkers range in size from 25 Tons up to 250 Tons punching capacity. Manufacturers offer capacities up to 8" x 8" x <sup>3</sup>/<sub>4</sub>" angle iron and 24" flat bar shears. The old rules still apply; never use an ironworker at 100% capacity - 100% of the time, try to buy a machine with at least a 15% to 20% tonnage cushion.

**PLATE SHEAR:** Plate shearing without distortion is difficult, Most manufacturers resolve this problem by having a very low rake angle on the top shear blade.

**ANGLE IRON SHEAR:** One of the hardest operations on an Ironworker is to shear angle iron. An adjustable rake top shear blade solves this problem.

**NOTCHING:** Notching capacity should equal angle iron thickness capacity.

**TOOLING:** Tooling should be standard with "off the shelf" deliveries.

The decision to have an ironworker in your shop is an easy one, however, care should be taken in choosing the proper tonnage and features you require.

PRINTED IN "CANADIAN INDUSTRIAL MACHINERY" - OCTOBER - 1997