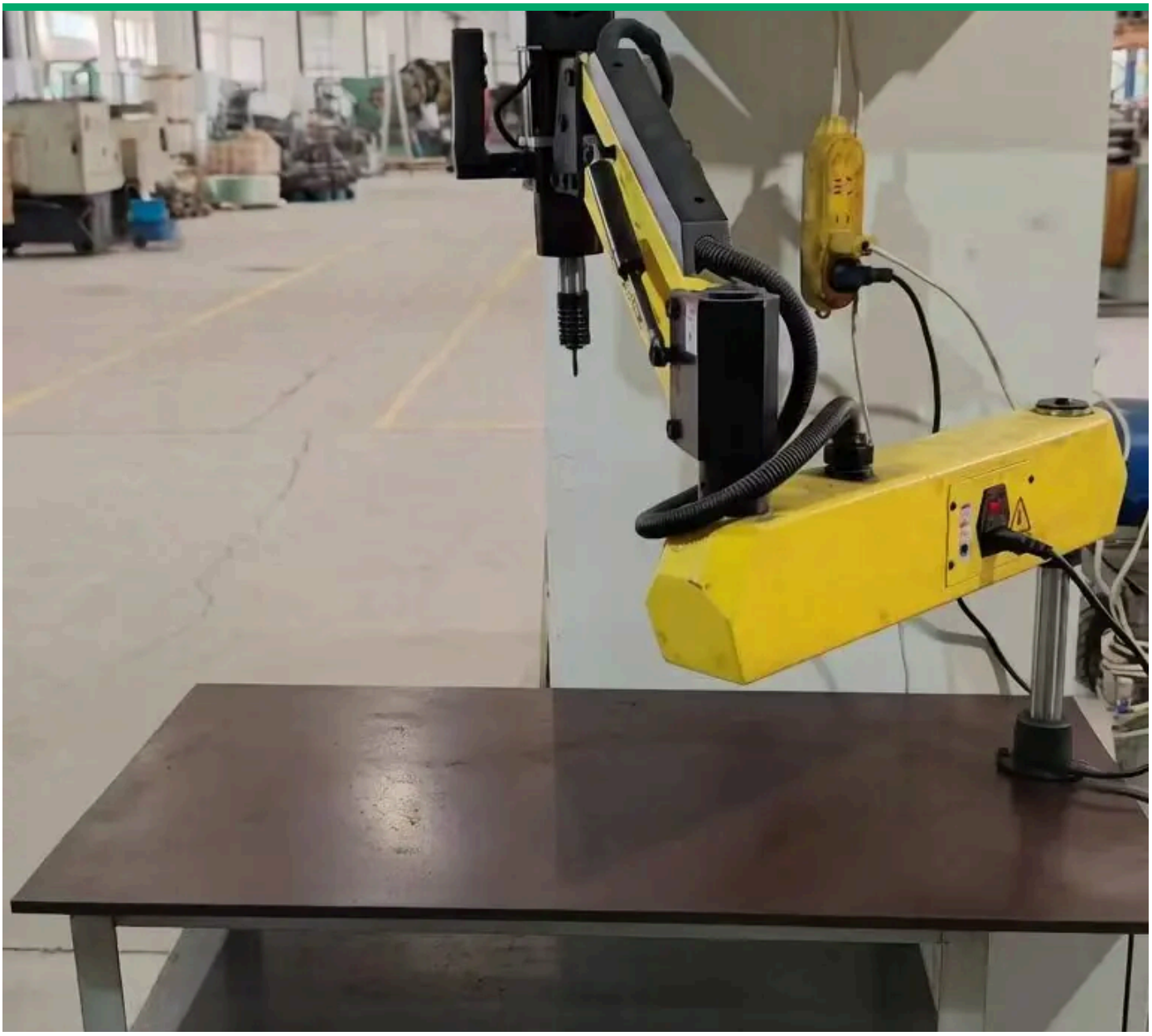
The Tapping Decision That Quietly Turns A Good Die Into A Maintenance Problem

In-die tapping removes a secondary operation and fixes thread position to the tool - but it moves cost, cycle time and risk into the die. When it is worth it.



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A bracket with four threaded holes looks like the textbook case for in-die tapping. One part per stroke, no second operation, no re-fixturing, no queue building up between processes. It is also one of the easiest ways to convert a die that runs cleanly into a die that stops.

That is not an argument against in-die tapping. It is an argument for being clear about what you are buying.

The genuine gain is positional. When the thread is formed in the die, it sits where the tool says it sits, part after part, without a fixture and without a second setup. The handling operation disappears, and with it the labour and the work-in-progress that sat between the press and the tapping bench. Those are real savings, and on the right part they are large.

The cost side gets less attention. In-die tapping adds stations, a tapping unit and - most importantly - chip management inside the tool. Chips are not only a thread-quality problem; they are a wear problem. And a tap that breaks inside a die stops the press. Depending on where it goes and how the unit is protected, that ranges from a fast change to a die repair, which is a very different kind of downtime from changing a tap at a bench.

Then there is the constraint that never appears on the quotation. Once tapping moves into the die, thread depth, thread position and the direction the strip presents the hole are all fixed by the tool. Changing a thread later means changing the die, not the fixture. On a developing programme that is often the deciding factor, and it is worth stating out loud before the tool is cut.

So where is the line? In our experience it comes down to volume and thread count. A part running in the hundreds of thousands a year, with a handful of threads whose position has to be consistent, usually justifies in-die tapping. Low or uncertain volume never amortises the tapping unit - it only adds risk. Threads on a face the strip cannot present cleanly inside the tool belong offline. And a part whose hole pattern may still move after the first articles should stay a second operation until it settles.

The trade is honest once it is written down: in-die tapping exchanges handling cost for die complexity and stoppage risk. Secondary tapping is slower per part and needs a fixture, but a broken tap costs minutes instead of a shift.

The full comparison, including the failure modes on each side, is here: https://balford.net/in-die-tapping-vs-secondary-tapping/

I am the founder of Balford, a deep drawing and metal stamping manufacturer in Zhuji, China. We deep draw and stamp metal housings on presses from 25 t to 350 t, to a maximum draw diameter of 250 mm, and quote from the drawing.

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