The Los Angeles Silhouette Club

High Capacity Hollow Point Bullet Moulds

(Inset bar conversion HP Molds by Erik Ohlen)

By: Glen E. Fryxell

One of the drawbacks to cast hollow points (HPs) is that they traditionally have come from single-cavity moulds and the production rate is kind of slow. That's never really bothered me as I just use the corresponding solids (from multi-cavity moulds) for practice, and save the HPs for when I'm hunting. This situation was improved upon by the Cramer style HP moulds, which are compatible with multi-cavity HP moulds and increase production rate significantly over the traditional single-cavity HP moulds. We are lucky in that there are now multiple places we can turn to now to get Cramer-style HP moulds (Erik Ohlen at http://www.hollowpointmold.com/, and Miha Prevac at http://www.mp-molds.com/).

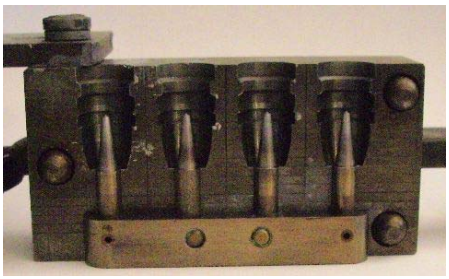
Now we have another option, and one that I have grown to like very much, the "inset bar HP conversion" option offered by Erik Ohlen over at Hollow Point Bullet Mold Service (email Erik, erik@hollowpointmold.com, or (541) 738-2479).

In this conversion, Erik mills out the bottom of the mould to accept a piece of bar stock that has all of the HP pins imbedded in it -- very compact and highly compatible with multi-cavity moulds. The bar stock is then mounted onto two transverse pins (much like the individual HP pins of the Cramer style HP moulds), which then pass through one of the mould blocks. Overall, this design is a very rugged one and I expect it will stand up to many years, no, *generations* of casting. This is a really well thought-out design, and solidly executed.

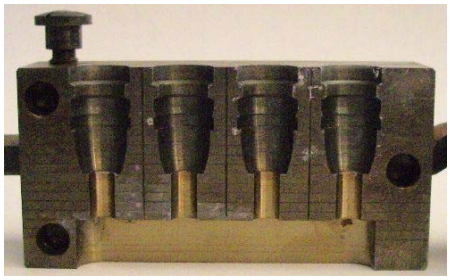
Erik calls this the "inset bar conversion", and while that description is accurate, it's kind of a mouthful and I just think of it as the "Ohlen HP" mould design. I sent Erik a Lyman 4-cavity 429421 mould, one of the older style with the "square-cut" grease grooves and the full size forward driving band, and asked him for a 4-cavity HP conversion, with .150" cavities, 7 degree taper, rounded tips, penetrating down to the crimp groove (similar to the original). A little while later the mould arrived in the mail, modified just as I had requested. In a word, Erik's machine work is excellent. The HP pins are perfectly centered in the mould cavities and the inset bar slides in and out of the mould block easily and freely. The HP pins are polished smooth so the bullets can drop free from their own weight. The mould blocks close easily and tightly (i.e. no gaps between the mould blocks). A subtle design feature is that the milled out portion of the base of the mould is ever so slightly bigger than the inset bar, leaving a gap of about .003" or .004" between the long edges of the inset block and mould blocks. This is an important feature, and provides positive clearance between the inset block too make sure the mould closes all the way, and also allows air to vent out the bottom of the mould during filling. This is a very good feature on a HP mould as it helps to increase bullet quality and lower reject rate by minimizing voids in and around the HP cavity due to trapped air pockets.

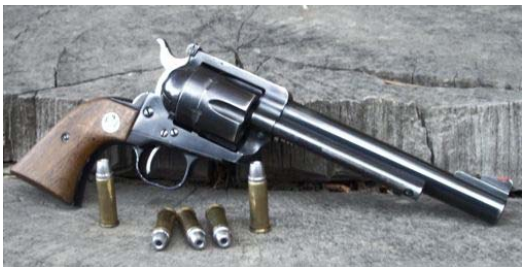
For the first casting session with the 4-cavity 429421 Ohlen HP, I fired up the lead pot with about 6 lbs of range scrap and then lubed the transverse pins with Dry-Slide and set the mould on the back edge of the lead pot to pre-heat. After everything was warmed up I started casting, and not surprisingly, the first several casts were highly wrinkled rejects due

to the vapors coming off from the cutting fluids/oils from the machine work burning out of the metal's pores. After everything got burned out and the mould started producing "keepers", I recycled the rejects and the sprue's and started casting in earnest. I was recycling my sprue's as I went along, and 17 minutes later, the lead pot ran dry. That's 6 lbs of HPs in 17 minutes! For bullets that weigh 240 grains each, that amounts to about 175 bullets in 17 minutes, or about 10 HPs a minute (later on I would sort and count the bullets to find 154 keepers and 15 rejects)! Try THAT with a traditional single-cavity HP mould!



The 429421 HP needs no introduction, having served sixgunners since the early 1930' it is the HP version of the Keith SWC, and it is an outstanding hunting bullet for deer-sized game. These bullets were cast with recovered range scrap with a little added tin, and had a measured BHN of ~8.5, specifically for use in the .44 Special at 1000-1200 fps. These bullets dropped from the blocks at 242 grains, and were .432" in diameter. They will be sized .430" and loaded up in .44 Special cases over 10.0 grains of HS-6 (1000 fps) or 17.5 grains of 2400 (1200 fps) -- two of my favorite hunting loads, the first for vermin, and the second for deer and hogs.





The next day a second casting session was carried out with 10 lbs of range scrap. It took exactly 30 minutes from the first pour to the last dribble from the lead pot to produce almost 300 Keith HPs, once again at a rate of almost 10 HPs a minute!

A similar casting session with 6 lbs of range scrap and 2 lbs of linotype (a blend that has a measured BHN of 12, formulated for the .44 Magnum). 21 minutes later the lead pot was empty. The bullets came out weighing 239 grains and were .432" in diameter. 8 lbs of 239 grain bullets in 21 minutes comes to just over 11 HPs a minute. My Ruger Flat-Top .44 Mag is going to be well fed with these cast HPs loaded to 1400+ fps.

Test loads were assembled next. For the softer bullets, I sized them .430", and lubed them with my home-made Moly lube. These bullets were loaded over 10.0 grains of HS-6, sparked with a CCI 300 primer, in .44 Special cases. The test gun in this case was a 7 ½" Ruger Old Model Blackhawk that I converted to .44 Special a number of years ago. Accuracy was good and velocities averaged 1022 fps. There was zero leading.

The harder bullets were also sized .430" and lubed with Moly lube. In this case, they were loaded into .44 Magnum cases over 23.5 grains of H110, with CCI 350 primers. This time, the test gun was an old Ruger Flat-Top .44 Magnum (circa 1960) that I picked up earlier this spring. Earlier tests with this gun revealed that even with the rear sight bottomed out, any bullets heavier than 240 grains would still shoot well above point of aim. The 429421 HP (weighing 235-240 grains, depending on alloy) is one of the few bullets I've tried

in this gun that will shoot to point of aim. These test loads (along with most of the previous testing with this gun), revealed mediocre accuracy (2 ½ to 3“ at 25 yards).Velocity of the test loads averaged an impressive 1466 fps. These results spurred me to sit down and take some measurements, and learn more about this particular sixgun. It turns out the throats on this revolver run .432”, or just a tad over. By sizing the bullets .430”, I was making them .002” undersized for the throats on this particular gun, which is not usually a good recipe for success.

So, I chose to split the difference and size a batch .431” -- .001” over nominal groove diameter of the barrel, and .001” under the throat diameter. This is an approach that I have used with recalcitrant revolvers in the past and had good success with. So I took a batch and sized them .431”, and lubed them with my home-made Moly lube. I reduced the powder charge to 23.0 grains of H110 since the first load had more velocity than I needed. On a beautiful, sunny day up in the mountains, I test-fired them to find that group size shrank by almost half, and velocities averaged 1405 fps. Just what I was looking for! This mould produces excellent bullets, and when they fit the revolver properly, they shoot very well indeed.

This 4-cavity mould conversion may be a little spendy for the individual bullet caster who is just casting for their own consumption (unless, of course, you really like cast HPs like I do, in which case it’s money well-spent), but this type of mould legitimately makes commercial production of cast HPs a viable proposition. With two bottom-pour lead pots (one melting while the other is casting), a continuous production rate of ~600 cast HPs an hour is realistic. For the home-caster, this is serious production; for the commercial bullet caster, this capability offers the first real opportunity to offer cast HPs as a commercial product.

Bottom-line -- the Ohlen 4-cavity HP mould rocks!

- Glen E. Fryxell

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