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4/30/93

To: T.C. Douglas

From: J.H. Coyle *JHC*

Subject: Monthly Report

LEADLESS BULLET (Copper):

It has been decided to use a common, one-driving band design for the three ERCOBT bullets for simplified fabrication.

There has been no further quotes from vendors for the manufacture of these bullets at the present time. The bullet samples from the only vendor that quoted has not been received.

The latest economics for these bullets are unacceptable. therefore, other quotes are needed and possibly other methods of fabrication will need to be defined.

30 Cal 165 gr. - two additional types of copper have arrived and tested in 3006 cartridges with basically the same results as with the original two materials. C102 material performs and machines essentially the same as C110 and the C147 material performs and machines essentially the same as C145. The C147 has good machineability while the C102 has a tendency to break drill bits. Both of the latest samples of bullets lose the entire nose portion up to the depth of the drilled hole during mush test. Weight retention is approximately 97% with a dia. of about 1.1X. Bullets from C102 had a v&p of 2304 / 581 and accuracy @ 100 yds - 0.8". Bullets from C147 had a v&p of 2798 / 555 and accuracy @ 100 yds - 1.0".

30 Cal 130 gr. - load has been developed for 300 Win Mag using a bullet with a single driving band and C110 material. V&P specs for this load are 2875 / 630. Listed below are the results of the developed load compared to 130 gr. X-bullet:

	Velocity (fps)	Pressure (x100)	Accuracy @ 100 yds. - 3/5's
X-bit	2950	625	0.9"
COBT	2947	610	0.6"
Mush @ 100 yds / 18" Gel.			200 yds / 18" Gel.
X-bit	96% wt. ret.	1.4X dia	96% wt. ret. 1.5X
COBT			
split	91% wt. ret.	1.4X dia	98% wt. ret. 1.6X
no split	97% wt. ret.	1.1X dia	90% wt. ret. 1.4X

270 Win 140 gr. - load has been developed for this product using a bullet with a single driving band and C110 material. V&P specs for this load are 2950 / 600. The following results were achieved of the developed load and compared with the 140 gr. X-bullet:

	Velocity (fps)	Pressure (x100)	Accuracy @ 100 yds. - 3/5's
X-blk	2834	601	0.8"
COBT	2394	611	0.9"
	Mush @ 100 yds / 18" Gel.		200 yds / 18" Gel.
X-blk	35% wt. ret.	1.4X dia.	100% wt. ret. 1.9X dia.
COBT			
split	91% wt. ret.	1.6X dia.	96% wt. ret. 1.7X dia.
no split	35% wt. ret.	1.1X dia.	92% wt. ret. 1.5X dia.

Different powders will be evaluated to try and gain additional velocity with lower pressure.

LEAD FREE P&R TRAINING AMMO:

A project request for the purchase or rebuilding of a 62A Bliss with modifications has been sent to H. Cast.

Purchasing has been in contact with a machine vendor that supposedly has two of these machines in storage. Information received from purchasing says that these machines are 95% new and could be running in a few days. They have been covered and stored outside. The vendor, who has been away on business, will be further contacted by our purchasing dept.

Initial tool drawings for a blanked disc have been marked up but formal drawings are still in process of being drawn. There should be no problem with having the first set of tools made in-house. This first set of tools should be available by 5/30/93.

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