

This topic can be found at:

<https://forums accuratereloading.com/eve/forums/a/tpc/f/4711043/m/2861098911>

jwp475

27 February 2010, 22:51

Terminal Bullet Performance

RIP's post are filled with info presented in a "humorous" format.... 🤔

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.

- Winston Churchill

boom stick

27 February 2010, 23:23

LOL Water torture.

Not Chinese but hey 😊

quote:

The "Iron WaterBoard Buffalo" may have been laughed at by the so called "experts."
However, it was a great interrogator of bullets.
Made them talk!
Made them tell the truth!

[577 BME 3"500 KILL ALL](#) [358 GREMLIN 404-375](#)

we band of 45-70ers (Founder)

Single Shot Shooters Society S.S.S.S. (Founder)

michael458

27 February 2010, 23:44

quote:

Originally posted by Mike70560:
Michael,

Go shoot something you will feel better.

Remember my first post on one of your threads was buy some Woodleighs, learn to shoot, go kill an elephant.

While that has worked many times I am finding there may be better ways of doing things.

To this day I believe the one elephant I killed was shot in a very good location for a side brain shot and did not kill it immediately. Stunned it, knocked it down, so that says something for Taylor's theory. But it was not dead. I did finish it off without any help. Did the bullet veer of course? After shooting newspaper and plywood I am beginning to think maybe so. (I am not looking for vindication of having to shoot more than once, just looking for the truth)

Anyway I have been impressed with the North Forks. Nothing I have placed in the test box at any angle has caused them to veer off course. I believe the magic bullet in the JFK assassination was a Woodleigh. I found one at a 90° angle to the box 15 feet away after it came out of the top of the paper and I had a lid on it. Still have not figured that one out.

The NF regulate well in my double maybe even better than the Woodleighs. They are way better than minute of elephant at 30 feet. The double rifle guys are just slow to change, but even Woodleigh changes as shown with their new line.

Going to Baton Rouge today. Our new company is running a welding procedure to start a project on Monday. Tomorrow will be 25 years that my Father passed away. I wish he was here to see all of this. Forty-Three was way too young. I may get a little shooting in tomorrow depending on how I feel.

Mike

I can't tell you how much it pleases me that you are on board with us! Another tester, takes some load off me, and better than that, it gives us confirmation from you, different mix, same results.

Yes, I did go shoot something, feel much better now!

I have to tell you, and have preached this to deaf ears for some time now, but you may very well be correct in your assessment of your shot on the elephant. I have said for years, maybe your bullet veered off course? I even made that suggestion to the "Great White Bwana Elephant" hunter that I mentioned earlier today, fell on deaf ears or ignorant ones. I have watched many times where he shot side or front brain, elephant runs away, or knocked down and get up and run away, time after time. Anyway, they don't listen or want to, so screw them, let them remain ignorant. They read in a book somewhere what they had was perfect elephant rifle and cartridge, so that's what they figure and off they go.

Thanks for your support and efforts, they are fantastic! I think it has also been quite an eye opener for you too! I love to see that light bulb, light up, makes it all worthwhile!

JFK woodleigh!! 🤔🤔🤔

Thanks Dennis! Your support is never ending and always consistent! Make mine a 500 MDM, I think it's the best, at least it's heavier with more momentum than a 458 lott. Just chunk the whole cartridge at them! In this case, I think a good size "Rock" would beat them all!

RIP

Yep, the Iron Buffalo had words with "Iron" in them! It told the truth! Now the truth being told down south with Michael and Mike! The truth shall set us Free! The truth is out there! And we are seeing it unfold in front of our eyes!

JWP-RIP is and always has been a favorite of mine too! I am very happy to have such great guys on this thread. A lot of great support from real shooters!

This entire thread would have been laughed out from upstairs, no thirst for truth there, gets in the way of ego! Pompous! Oh shit, don't get me started again, one of those days!

Hey, I have tests to report! Yes!!!!!!!!!!!!!! On the way! NEXT!!!!

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY

michael458

27 February 2010, 23:59

Well today I have my head stuck up the goats ass!!! Yep, that's right, you heard it here first! The other day, building a new box of print for this test, I built it in the old box, with the 2X6 backside. Oh well, it's fine, that small meplat Grand Slam is not going to go that far anyway!

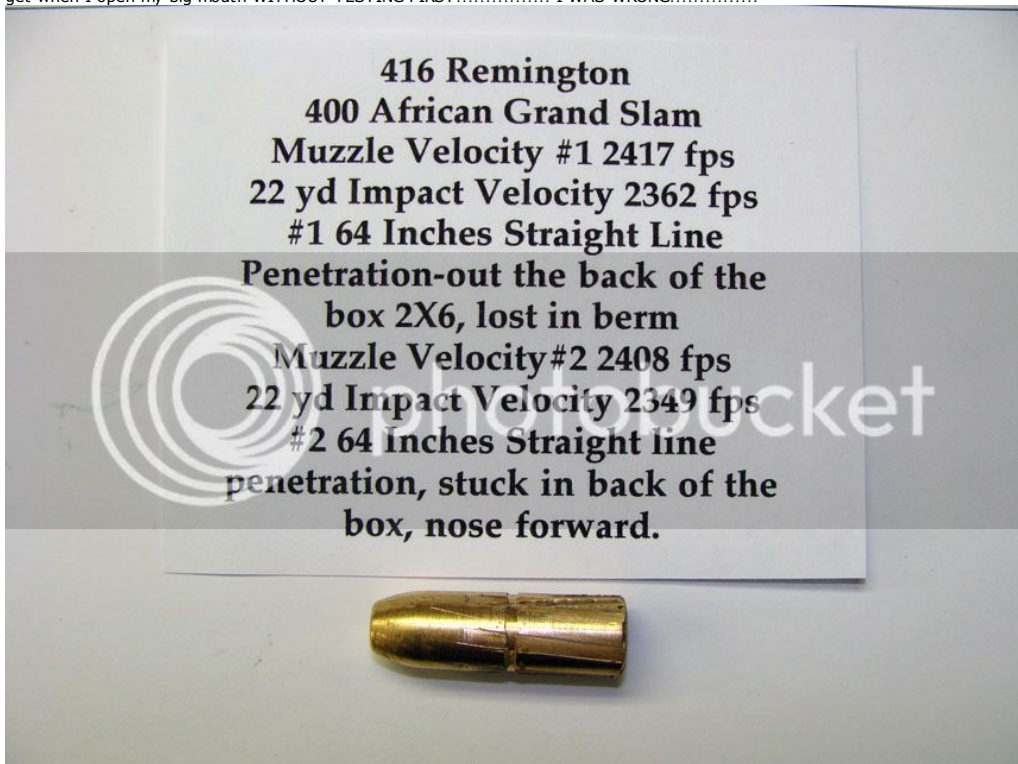
I want everyone to take note of this, I said the other day when I posted this photo of the loaded test that I did not think the 416-400 gr Grand Slam would do well, it's meplat is too small! Remember that? I said it would veer off course!



**416 Remington
400 Grand Slam Solid**

**416 B&M
330 GSC HP**

Well I need that photo that someone had a few pages ago with the guy with the foot stuck in his mouth---THAT'S ME!!! Foot in Mouth-head stuck up a goats ass! That's what I get when I open my big mouth WITHOUT TESTING FIRST!!!!!!!!!!!!!!!!!!!! I WAS WRONG!!!!!!!!!!!!!!!!!!!!



**416 Remington
400 African Grand Slam
Muzzle Velocity #1 2417 fps
22 yd Impact Velocity 2362 fps
#1 64 Inches Straight Line
Penetration-out the back of the
box 2X6, lost in berm
Muzzle Velocity#2 2408 fps
22 yd Impact Velocity 2349 fps
#2 64 inches Straight line
penetration, stuck in back of the
box, nose forward.**

I did shoot two of the 3 bullets I had on hand from Buffalo, all the way from Denmark--Thank you Buffalo for providing these for the test. As you see both bullets gave 100% dead

straight line penetration right to the end! Bullet #1 EXITED the back of the box after driving straight through 64 inches of new very tight and tough medium!



Lost in the impact boxes! Bullet number two damn near exited the back of the box too and was nearly lost! But it managed to stick out the back and stop, or it would have been gone too!



Both were tested in one of my Winchester M70s in 416 Remington. Twist Rate? I figure standard 1:14, but could be wrong about that??? I suppose that the length of this bullet, being short, obviously allowed it to be very stable out of that twist, even with a small for caliber meplat, which was a great surprise! However, we have already proven, if you are in that just a bit too small meplat, say 50-60% of caliber, it better be stable and have the right twist rate, or a fast twist rate to be stable! I suppose the weight and compactness of the Grand Slam assisted in making it stable so that it could penetrate well!

The 400 gr African Grand Slam passes the test with Flying Colors! It's a deep diver!

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

michael458

28 February 2010, 00:08

Since I had new medium and would not cross wound channels I decided to retest the 400 gr Barnes Banded in the same rifle, with the same LOAD! Take note of the velocity difference!

416 Remington
400 Barnes Banded Solid
Muzzle Velocity #1 2497 fps
22 yd Impact Velocity 2430 fps
Muzzle Velocity #2 2493 fps
22 Yd Impact None Recorded
#1 60 Inches Total Penetration 1
inch off course
#2 60 Inches Total Penetration 1
Inch off Course
Both Bullets Veer slightly up
Found Nose forward up angle.



The 400 Barnes Banded in the 416 Remington did rather well. Not as good as the Grand Slam, and I think it was because it was just slightly unstable, as you see both bullets were about an inch off course over the 60 inches of penetration. Now keep in mind, that's 5 feet of penetration and 1 inch off course! No, not as stable, and that limited it's penetration for sure, but still 1 inch off course over 5 feet is of little consequence in the real world. Still I am 100% convinced that a faster twist would stabilize this same bullet and penetration would have been equal to the Grand Slam, or better because of a larger meplat. If twist rate is 1:14---a 1:10 or 1:12 would have done the trick!

Both barnes bullets were of course Nose Forward, but were at a slight up angle!

A photo of the 400 Barnes Banded and the 400 African Grand Slam



<http://www.b-riflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

jwp475

28 February 2010, 00:13

Any one know the twist rate of the 416 Rigby in the CZ?

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

michael458

28 February 2010, 00:21

Where are you Gerard, these are yours!

I tested Gerards 330 gr GSC HV's (I think they call them HV). Any way, what we call a NonCon--or Non Conventional Expanding trauma inducing SOB! Some Wicked bullets! Now they weight exactly the same as my 330 gr Brass 416 caliber HP NonCons, so I wanted to test in the 416 B&M for comparison. Gerards bullet is copper. Well it did exactly what it is supposed to do, hit hard, induce great amounts of trauma to target material, shed some petals, copper petals stay within the center of the wound channel as they shear, they do not act like the brass petals shearing just inside target with petals moving away from center. My copper HPs do the same thing if the velocity is high enough. As you can see a petal or so hung on until the end, both bullets were found sideways at the very end of penetration, but stayed on a straight course to just before the end. Penetration was excellent for this type bullet, 16 inches. Very consistent. More velocity would give deeper penetration, and more trauma. Velocity is the key for NoCon bullets, the more the better.

These were also sent by Buffalo, via Denmark! I still have a couple of these left, and while the 416 Remington is set up I most likely will do some more tests this coming week at higher velocity with these, and the brass NonCons!

Gerard, Excellent bullet, these would hammer just about anything one would shoot an expanding bullet with. I am sure folks have shot buffalo with this same bullet with success???? I know all the antelope have been hammered with them! I would use them with extreme confidence, good job, good bullet! They are a little ugly however with that black stuff on them and that ass end! LOL



<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

jwp475 **28 February 2010, 00:23**

michael458, did the Barnes 350 grain solid track straighter than the 400 grainers? I forgot if they did or not

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

Mafunyane

28 February 2010, 00:25

Michael
What twist rate would you say is better for 550gr. .458 bullet (monolithic)

My rifle is a standard .458 win mag with 25 inch barrel

All that is needed for evil to triumph is for good men to do nothing!!

michael458

28 February 2010, 00:30

quote:

Originally posted by jwp475:
michael458, did the Barnes 350 grain solid track straighter than the 400 grainers? I forgot if they did or not

JWP

Yes, the 350 Barnes Banded and the 370 Northforks that I work with are always 100% dead straight, always around 57 inches of penetration (57 inches-top of my head) I don't think I have tested them in other rifles other than the 416 B&Ms to be honest, or I don't recall it. I might put a couple through in the 416 Remington case while I have it out.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

jwp475 **28 February 2010, 00:32**

Does the 350 in your opinion offer enough penetration on anything that one might encounter in the bush?

A 9mm may expand to a larger diameter, but a 45 ain't going to shrink

Men occasionally stumble over the truth, but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

michael458 **28 February 2010, 00:34**

quote:

Originally posted by Mafunyane:
Michael
What twist rate would you say is better for 550gr. .458 bullet (monolithic)

My rifle is a standard .458 win mag with 25 inch barrel

Mafunyane

Oh man, I am no twist expert at all! I am just learning too, but a 550 gr .458 Mono will be a very long bullet, very long. I imagine 1:10 or slowest would be 1;12! But if you are in 458 Winchester, you really don't need to concern yourself with even a 500 gr mono! Use the 450s, they will do anything you need to do, aren't you using the 450 Barnes Banded now??? Or have I lost what little mind I have left? Maybe left it behind up the goats ass, I don't know! But if you are on the 450 now, you don't need to move to a bigger bullet for anything you need to do in 458 Winchester.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

michael458 **28 February 2010, 00:41**

quote:

Originally posted by jwp475:
Does the 350 in your opinion offer enough penetration on anything that one might encounter in the bush?

From everything I can see the answer is yes to that. This bullet tests good, it's always consistent, always dead straight. If I hesitate any at all, it's only because I have little experience in the field with 416 anything. I have only shot 12 animals with 416s and only one of them was cape buffalo, so my experience with 416 is very short when compared to 458 and .500.

With that being said, yes I think the 350 Barnes Banded or even the 370 North Fork is more than enough to handle anything you need to do with a 416.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

416Tanzan **28 February 2010, 00:42**

First, for jwp475--
the CZ 416 rigby uses 16.5" twist.
I know, I have one and thoroughly enjoy it. A great rifle for those with modest budgets.

On the tests, I was able to run 'stability factor' figures for the two bullets by guesstimating the lengths as 1.45" for the Barnes 400 BS and 1.25" for the GlandSlam Solid. Using the stated velocities and 14" assumed twist, the GS has 4.64 gyro-stability factor. The Barnes 400 has 3.08.

that 4.64 stability factor appears to have a role to play in the great, straight penetration. That is a great bullet.

Once again, plain ol' physics has a role to play. For straight penetration, the higher the stability factor the better. 3.0 is good, 4.+ is better!

And returning to the CZ and the traditional 16.5" Rigby twist--a person should be strongly recommended to use a 350 grain Barnes FN solid (1.32") in a 16.5" twist, or else to go with the even shorter grand Slam (1.25"). The 400 grain Barnes is TOO long for the 16.5" twist.
So I use 350 TSX first shots and 350 BS follow-up. The 350 does allow more velocity for plains game: 2650-2700fps, or 2800 if you wish.

+ + + + + + + +

"A well-rounded hunting battery might include:
500 AccRel Nyati, 416 Rigby or 416 Ruger, 375Ruger or 338WM, 308 or 270, 243, 223" --
Conserving creation, hunting the harvest.

michael458 **28 February 2010, 00:42**

Mafunyane

You know anyone around Louis Trichardt?

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

michael458

28 February 2010, 00:49

Hey Tanzan

Excellent advice concerning the 416s, I concur totally! Your length on the bullets is not far off--1.484 on the Barnes 400 and 1.303 on the Grand Slam.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

Mafunyane

28 February 2010, 00:49

Your mind is still good.

Was just wondering if .458 standard twist can stabilise such a long bullet.

I would not change the weight I'm using now.450 gr in win mag is tops.

All that is needed for evil to triumph is for good men to do nothing!!

michael458

28 February 2010, 00:53

quote:

Originally posted by Mafunyane:
Your mind is still good.
Was just wondering if .458 standard twist can stabilise such a long bullet.
I would not change the weight I'm using now.450 gr in win mag is tops.

Mafunyane

Are you close to Louis Trichardt?
Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

Mafunyane

28 February 2010, 00:57

quote:

Originally posted by michael458:
Mafunyane
You know anyone around Louis Trichardt?
Michael

Not in town, but north off Makadu (Louis Trichardt)
on the way to Musina a few. I mostly hunt in that region.

All that is needed for evil to triumph is for good men to do nothing!!

Mafunyane

28 February 2010, 01:01

quote:

Originally posted by michael458:
quote:
Originally posted by Mafunyane:
Your mind is still good.
Was just wondering if .458 standard twist can stabilise such a long bullet.
I would not change the weight I'm using now.450 gr in win mag is tops.

About 100km or 63 miles
Mafunyane

Are you close to Louis Trichardt?
Michael

All that is needed for evil to triumph is for good men to do nothing!!

michael458

28 February 2010, 01:05

Mafunyane

Don't happen to know a fellow Leon Koen do you? Andrew Schoeman? Just curious, friends of mine.

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

boom stick

28 February 2010, 01:41

Would it be safe to say that a shorter bullet of the same weight and diameter has more potential to be "Stable"?


577 BME 3"500 KILL ALL 358 GREMLIN 404-375

we band of 45-70ers (Founder)
Single Shot Shooters Society S.S.S.S. (Founder)

capoward

28 February 2010, 03:06

Good discussions today...this thread is definitely for the participants who think "outside the box" and as such is of tremendous benefit to even those who think "inside the box"... and I definitely have no comment regarding open minds/closed minds or open eyes/closed eyes.

Rip's IWBB, yours and now Mike's bullet boxes (you both need to give them a moniker - hey didn't someone call your heavy box mix...the Mastodon mix?) So how about this one, Michael's Double Mastodon Bullet Box or MDMBB? 

I truly didn't expect any comments in the DR Forum thread containing Mike's 470 NE tests...I just posted the thread as an FYI...and yes I did create the thread as a direct result of reading the 470 vs 500 Penetration thread...specifically because of the post about the 470 NE being a "poor" penetrator. I just wanted to enlighten the DR Forum readers that with just changing the bullet to a driving band FN monometal solid would turn that 20" twist rate 470 NE into a penetrating machine!

Regarding proper twist rate; I've read multiple studies...yes many years ago...that identified twist rates that were both too fast and too slow to properly stabilize a single weight/style bullet. Though I truly admit that I've never read a study that focused upon identifying the proper combination of twist rate, bullet weight and style to optimize bullet performance between end-of-barrel and intended target as well as optimal bullet performance within the target mass...when that target mass is a dangerous game animal comprised of different internal biomass and consistency of size and biomass between same breed of animal.

I personally think of myself as having an OTB mindset. I do must admit that I'm developing a somewhat fixed mindset regarding a few issues...though I believe my mindset regarding these issues is atypical of the traditional ITB mindset.

So...here goes. I personally believe in the following statement relating to firearms ballistics, "a proper design can overcome an intertwined less-than optimal design."

Insert bullet design and barrel twist rate, or gunpowder and barrel length, or bullet construction and barrel bore/groove tolerance, for the word "design" in the foregoing statement, switch them back and forth, and that's where I'm at regarding that intertwined issue.

Now I'd like to raise an issue that I hope will enhance this thread. That issue is the consistent measurement and listing of the intertwined ballistics information pieces.

-Currently the measurement of bullet penetration and both muzzle and impact velocities - except for chronograph failure to perform - are consistently taken and listed.

-Currently the relating barrel twist rate, bullet meplat if FN shape, and bullet length - unfired and fired condition - is inconsistently taken and listed.

I therefore request that the very few individuals - read here Michael, Mike and RIP plus any future person(s) - take these additional piece measurements and consistently include them with their bullet penetration and chronograph results.

Thank you for considering this additional work to your already intensive ballistics workload.

Jim 

"Life's hard; it's harder if you're stupid"
John Wayne

RIP

28 February 2010, 03:57

quote:

Originally posted by jwp475:

RIP's post are filled with info presented in a "humorous" format.... 

Thank you, jwp475, you get it, my purpose here. 

RIP

28 February 2010, 04:30

quote:

Originally posted by jwp475:

Any one know the twist rate of the 416 Rigby in the CZ?

The three that I have owned and measured had 1:16.5" twist, which is the CIP spec.

It may have changed? Trust but verify.

I own two Winchester M70 Classics in .416 Remington, a standard and a Big Five model. Both are 1:14" twist, best as I can tell by my ball-bearing-cleaning-rod-handled-tight-patched-jag method of measuring (+/- 1/2" of twist).

Gerard Shultz of GSC makes some special twist measuring jags which I wish he would make available here.

I presume they are just a flat-sided jag that fits the grooves of the specified caliber.

Better than a tight-patched jag for following the grooves without slippage.

I requested some once but they never came in the bullet shipment so I quit asking.

A tight-patched close-fitting jag is pretty good at following the rifling without slippage.

RIP

28 February 2010, 04:47

Doc M,
Good report.

As long as you are not hitting steel or a lot of bone, the discontinued Speer AGS .416/400gr solid is an excellent intact penetrator, and even if the tungsten pencil lead penetrates the brass FN jacket, it can still do a lot of damage on steel or bone.

Small meplat and relatively fast twist (1:14") for overall length of bullet may well be compensating for the small meplat size, eh?

George Hoffman chose 14" twist for his .416 Hoffman, long before Remington copied it.

Before moving on to the happy hunting ground, George Hoffman opined that he would choose 1:12" twist if he were to build another .416 Hoffman rifle.

He posted that here on ar.com.

R.I.P. George, see you in Valhalla!

Those GSC HVs need to be stepped up to over 2600 fps impact to shed all their petals at impact, and act more like good NONCONS,

shedding all petals in radial wounding (death star) and producing a cylindrical remnant that will penetrate deeper.
Or just use a brass NONCON!
The GSC will have a better BC, unless the brass NONCON could be reprofiled to smaller HP meplat.
What is the limit in pointiness for a brass HP to reliably shed all petals?
I think that is a good thing, the "death star."

I have 20 of the Speer AGS bullets left over, and a couple of boxes of the GSC HVs. Let me know if you want them, and I will send them to you.

RIP

28 February 2010, 04:56

quote:

Originally posted by boom stick:
Would it be safe to say that a shorter bullet of the same weight and diameter has more potential to be "Stable"?

Yes. 🤔

RIP

28 February 2010, 05:02

capoward Jim,
Yes,
we should all strive to report a measured twist and specified twist from manufacturer if known.
And bullet length and meplat size pre- and post- impact to best of our ability to measure.
And velocity at a specified range close to muzzle or close to target, and best estimate of BC and impact velocity.
Excellent point. 🤔

But what is a "metaplat?" ... spellchecker does not recognize "meplat" either, silly spellchecker!

Canuck

28 February 2010, 05:45

quote:

Originally posted by RIP:
Gerard Shultz of GSC makes some special twist measuring jags which I wish he would make available here.
I presume they are just a flat-sided jag that fits the grooves of the specified caliber.
Better than a tight-patched jag for following the grooves without slippage.
I requested some once but they never came in the bullet shipment so I quit asking.

Same here, but I asked about 3x and they were offered a few times too. I'll stop taking it personally now however. 😊

[2009 Tanzania Hunt Report](#)

[My 2000 to 2009 "Decade in Review" Slideshow](#)

Canuck

28 February 2010, 05:46

quote:

Originally posted by RIP:
George Hoffman chose 14" twist for his .416 Hoffman, long before Remington copied it.
Before moving on to the happy hunting ground, George Hoffman opined that he would choose 1:12" twist if he were to build another .416 Hoffman rifle.
He posted that here on ar.com.
R.I.P. George, see you in Valhalla!

Consider me an independent validator of that. 😊 His opinion certainly helped me land on 1:12" for m 416 Taylor.

[2009 Tanzania Hunt Report](#)

[My 2000 to 2009 "Decade in Review" Slideshow](#)

michael458

28 February 2010, 06:24

quote:

Small meplat and relatively fast twist (1:14") for overall length of bullet may well be compensating for the small meplat size, eh?

George Hoffman chose 14" twist for his .416 Hoffman, long before Remington copied it.
Before moving on to the happy hunting ground, George Hoffman opined that he would choose 1:12" twist if he were to build another .416 Hoffman rifle.
He posted that here on ar.com.
R.I.P. George, see you in Valhalla!

RIP

Yes on all counts! Michael also opines that should I build another personal 416 B&M (I now have only 3) that it will be a 1:12 twist rate for sure! Also the next 458 B&M (I gave one to a son, now I am down to only 4 personal guns) will also be 1:12. All the .500s are 1:12.
And word from on high says the 9.3 B&M is 1:12 too.

I also figured the Winchesters were 1:14 also.

Jim is correct, I can and will go over all those next week, I still have samples from everything and can get all those measurements. I think I have recorded most measurements, but I have not put twist rates next to the tests! On what I have done I am pretty sure I can go back and fill in ALL the blanks!

RIP, thanks for the offer of the AGS and GSCs, but hold on to them, if needed in the future we can get together on them.

Yes, I figured the GSC HVs need a bit more velocity than what I run in the B&M. As for the brass, the 416 Barrett HPs are pretty pointy, so I suspect one can design and have done about what one can imagine. I will check the Barrett bullets, if I have enough I will put one in the box and see how it reacts in comparison with the others. As you know, the other NonCons I am working with have very large HPs, not very good BCs of course. From my end of things I don't much care about BCs for myself, but it is a good point to consider from other points of view for longer distances. About 90% of the time at least I get an impact velocity, so these things are not an issue.

I am shooting the 330 416 brass NonCons in April for the muskox, but I am not sure how much bullet digging or study I will get done there. Depends on how cold it is and how miserable I am at the moment I suspect, but I am very interested to see how the "Death Star" does. Worst case is that I will get an in depth field study next spring on a South African test shoot! But I am still working out details, as I want to get in some heavy work with the 500 MDM too! Working out two major shooting projects is a effort, just sorting

guns and ammo out to get there! But I might be taking the boys too on that and they can share loads of ammo and rifles too!

Late boys, way the hell past my bedtime!

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!
Live Outside The Box of "Conventional Wisdom"

I do Not Own Any Part of Any Bullet Company, I am not in the Employ Of Any Bullet Company. I do not represent, own stock, nor do I receive any proceeds, or monies from ANY BULLET COMPANY. I am not in the bullet business, and have no Bullets to sell to you, nor anyone else.

someoldguy

28 February 2010, 06:30

quote:

Both were tested in one of my Winchester M70s in 416 Remington. Twist Rate? I figure standard 1:14, but could be wrong about that??? I suppose that the length of this bullet, being short, obviously allowed it to be very stable out of that twist, even with a small for caliber meplat, which was a great surprise! However, we have already proven, if you are in that just a bit too small meplat, say 50-60% of caliber, it better be stable and have the right twist rate, or a fast twist rate to be stable! I suppose the weight and compactness of the Grand Slam assisted in making it stable so that it could penetrate well!

quote:

I want everyone to take note of this, I said the other day when I posted this photo of the loaded test that I did not think the 416-400 gr Grand Slam would do well, it's meplat is too small! Remember that? I said it would veer off course!
Well I need that photo that someone had a few pages ago with the guy with the foot stuck in his mouth---THAT'S ME!!! Foot in Mouth-head stuck up a goats ass!
That's what I get when I open my big mouth WITHOUT TESTING FIRST!!!!!!!!!!!!!!!!!!!! I WAS WRONG!!!!!!!!!!!!!!!!!!!!

Don't feel bad, Michael. Terminal ballistics is a tough game to make predictions in! For everything I get right, it seems like I get three things wrong!
Also, you might have noticed that I didn't have the guts to make a prediction one way or another.

Anyway, using a 65 percent meplat diameter, my program gives me an amazing 87 inch penetration for your medium with this bullet! But this could be wrong because it's the "short version" of my longer formula. (Only me, Mr. Irony, could have a short version of a long formula. 😊)

I know that I said before that I thought that length had something to do with stability, but the twist rate would certainly compensate for that. This halfway confirms what I was thinking about shorter bullets and fast twists, but I also think of the short, fast 5.56 NATO, which is notorious for its terminal instability. This is also probably one of the reasons for its effectiveness.

So I must admit I'm on the fence about certain matters, which is why I haven't thrown anything out for the consideration of the others.

Never fear, I'll come up with something. Even if it's wrong. 🙄

Glenn

capoward

28 February 2010, 06:30

quote:

Originally posted by RIP:
But what is a "metaplat" ... spellchecker does not recognize "meplat" either, silly spellchecker!

RIP,

Hopefully metaplat and meplat are one in the same thing as I've seen both spellings used in different articles to describe the same thing. I figured it was an English vis-à-vis French language situation, basically an either or thing.

But I truly do not know. Hopefully someone who truly knows to pipe up and let me know if it's an either or situation or if I'm atrociously misspelling the word. ☐

Jim 🙄
"Life's hard; it's harder if you're stupid"
John Wayne

boom stick

28 February 2010, 06:56

The smaller meplat of the Grand slam meant more penetration but less damage per foot of penetration I think.

577 BME 3"500 KILL ALL 358 GREMLIN 404-375

we band of 45-70ers (Founder)
Single Shot Shooters Society S.S.S.S. (Founder)

capoward

28 February 2010, 07:20

Glenn,

Your comment:

quote:

I know that I said before that I thought that length had something to do with stability, but the twist rate would certainly compensate for that. This halfway confirms what I was thinking about shorter bullets and fast twists, but I also think of the short, fast 5.56 NATO, which is notorious for its instability. This is also probably one of the reasons for its effectiveness.
So I must admit I'm on the fence about certain matters, which is why I haven't thrown anything out for the consideration of the others.

Caused me to wonder whether you were referencing its initial use in Vietnam War era, the Gulf War, or the current conflicts in Iraq and in Afghanistan. Anyway I did a quick check of the M16 in Wikipedia and found the following from the Vietnam War era:

quote:

The damage caused by the .223 (5.56mm) "varmint" bullet was easily accounted for. Standard U.S. rifles generally had 12 inch rifling twists inside their barrels (one complete bullet rotation within 12 inches), whereas the AR-15, as designed by Stoner, was to have a 1 in 14 inch rifling twist, as rapid spraying of projectiles at close range would be the norm rather long range accuracy. However Colt, with its antiquated equipment, had made some of the AR-15s with up to 18 inches per total bullet rotation, thus creating a bullet's flight to wobble while en route to target. The impact of these projectiles on human flesh created horrible wounds; as well as very few prisoners of war. [http://en.wikipedia.org/wiki/M16_rifle]



Jim
"Life's hard; it's harder if you're stupid"
 John Wayne

capoward

28 February 2010, 08:38

Ok...I've been pondering a bit today...and no the head doesn't hurt much! Anyway it's been raining off and on all day today which ruined my plans so not much else to do. Anyway here are some additional thoughts regarding twist rates.

At least one of the studies I mentioned in an earlier post referenced two twist rate points, one too fast and one too slow to properly stabilize a single weight and style/shape of bullet. And these two twist rate point would perhaps change when the weight and style/shape of bullet changed.

Please remember, I read these studies many years ago so I'm making these statement based upon the 'best of my recollection' as do not possess them today to re-read and re-verify my proffered comments. Perhaps Glenn or IBT can step forward and provide a link a study or studies along these lines for everyone's enlightenment.

Anyway back to twist rate; in between these two twist rates points of instability were a multitude of possible twist rates that give different stability factors to the bullet at different ranges...short, long, very long, to extremely long.

Please note that I've left these different range descriptions - short, long, very long, to extremely long - without exact range specificity because these ranges will be different depending 1st upon the cartridge and intended hunted game and then 2nd upon the rifle/shooting skills of the individual hunter.

So for the big bore 500 NE DR hunter short range can easily mean 10 paces (presuming 10yds here) while extremely long range might be 175yds compared to the open space .264 WinMag bolt rifle hunter where short range might be 100yds and extremely long range 500yds.

Personally when looking today's trend of increasingly faster twist rates for small and medium caliber cartridges (and I include all sub-40 caliber cartridges as a medium bore) and I wonder why we've not seen faster twist rates offered by factories in the 40-60 caliber zone. I'm aware of the perception that the faster twist rates of the under 40 caliber cartridges is due to newer VLD and spire point monometal bullet development but then I also recollect that Mauser manufactured his 6.5mm chambered rifles with very fast twist rates over 100 years ago to appropriately stabilize the long-heavy bullets loaded in the factory cartridges but I'm also aware this faster twist rate handled the shorter-lighter bullets equally as well.

I threw this listing together to identify the typical range of bonded C&C hunting bullets with a feel for USA and European barrel twist rates:

- Legend: Woodleigh Hunting Bullets; Twist Rate: PacNor Barrels & (Lothar Walther Barrels)
- .270 caliber: Bullet Lengths: 1.087" - 1.209" = Velocity Range: 1900-3000 : Std Twist Rates: 10" (10")
 - .308 caliber: Bullet Lengths: 1.080" - 1.428" = Velocity Range: 1800-2900 : Std Twist Rates: 10", 12" (10", 12", 14")
 - .338 caliber: Bullet Lengths: 1.188" - 1.558" = Velocity Range: 1800-2900 : Std Twist Rates: 10" (10")
 - .358 caliber: Bullet Lengths: 1.043" - 1.443" = Velocity Range: 1800-2500 : Std Twist Rates: 12", 14" (12", 16")
 - .366 caliber: Bullet Lengths: 1.083" - 1.441" = Velocity Range: 1800-2900 : Std Twist Rates: 12" (12", 14.2", 16.5")
 - .375 caliber: Bullet Lengths: 1.013" - 1.408" = Velocity Range: 1800-2500 : Std Twist Rates: 12", 14" (12")
 - .416 caliber: Bullet Lengths: 1.198" - 1.510" = Velocity Range: 1800-2400 : Std Twist Rates: 14" (14", 16.5")
 - .423 caliber: Bullet Lengths: 1.128" - 1.491" = Velocity Range: 1800-2400 : Std Twist Rates: 14" (14")
 - .458 caliber: Bullet Lengths: 0.949" - 1.521" = Velocity Range: 1800-2400 : Std Twist Rates: 14", 20" (14", 18")
 - .474 caliber: Bullet Lengths: 1.247" - 1.341" = Velocity Range: 1800-2200 : Std Twist Rates: 18" (21")
 - .505 caliber: Bullet Lengths: 1.197" - 1.411" = Velocity Range: 1800-2200 : Std Twist Rates: 16" (16.5")
 - .510 caliber: Bullet Lengths: 1.158" - 1.396" = Velocity Range: 1800-2250 : Std Twist Rates: 18" (15")
 - .584 caliber: Bullet Lengths: 1.155" - 1.307" = Velocity Range: 1800-2100 : Std Twist Rates: 18" (20")

Barrel twist rates noted from PacNor and Lothar Walther were those identified by each company as standard twist rates; both companies offer other twist rates in some of these calibers.

I understand from using many of the barrel twist rate calculators that they deal principally by bullet diameter and length and then factor in bullet speed (some like Greenhill split velocity at above or below 2700fps).

Heck if a 1:6" twist rate won't disintegrate a small-diameter C&C construction bullet when fired at 3200+fps why should I perceive that a 1:10" twist rate will destroy large diameter heavy jacketed C&C bullet fired at 2150fps to 2400fps? Just makes no sense to me! Then throw in modern monometal bullet construction and it makes even less sense!!

Michael has stated that 1:12" twist rate barrels will be used for his future rifle builds. I personally lean towards a 1:10" twist rate for big bore cartridges and a 1:9" twist for medium bore cartridges as both twist rates are well within the slow-side of fast twist rate instability.

So to further my desire for continuing education I have a quick question for the pundits, "Why would a 10" twist rate not be as advantageous for use with a 1.396" length .510 caliber bullet as it is for use with a 1.396" length .308 caliber bullet?"

Comment: I sure hope this makes sense as wife just turned on Olympics and I need to watch the racing!



Jim
"Life's hard; it's harder if you're stupid"
 John Wayne

capoward

28 February 2010, 09:23

Ok watching the Olympics just had one of those moments.

Doug Turnbull has proprietary Barnes 350gr and 400gr TSX bullets and 400gr and 450gr BND SLD bullets that he uses in his 475 Turnbull cartridges. The Turnbull website lists the loaded 475 Turnbull ammunition for sale but does not list the Barnes bullets for sale as components.

I'm thinking these bullets should work great in the 470 NE and the 470 Lott, perhaps even a future build 470 B&M, so it would be nice if Mike could test them in his Krieghoff 470 NE DR and Michael in one of his M70 Winchester 470 Lott rifle.

Does anyone know how say a dozen bullets of each (six each for Mike and Michael) could be obtained? Or is this nothing more than internet pipe dream?



Jim
"Life's hard; it's harder if you're stupid"
 John Wayne

I Bin Therbefor

28 February 2010, 10:05

It's midnight and I've turned into something or other. Anyway, here's a couple of quotes I've saved from way back where;

Science
 A set of cognitive and behavioral methods to describe and interpret observed or inferred phenomenon, past or present, aimed at building a testable body of knowledge open to rejection or confirmations.

Two major methodologies in the sciences
 Experimental
 Historical

Scientific paradigm
 Framework(s) shared by most members of a scientific community, to describe and interpret observed or inferred phenomena, past or present, aimed at building a testable body of knowledge open to rejection or confirmation.

Paradigm shift
 A new cognitive framework, shared by a minority in the early stages and a majority in the later, that significantly changes the description and interpretation of observed or inferred phenomena, past or present, aimed at improving the testable body of knowledge open to rejection or confirmation.

Scientific progress
 The cumulative growth of a system of knowledge over time, in which useful features are retained and non-useful features are abandoned, based on the rejection or confirmation of testable knowledge.

and

"Theory without experience is mere intellectual play;
experience without theory is blind."
Immanuel Kant

Night All

capoward

28 February 2010, 10:58

quote:

Originally posted by I Bin Therbefor:
It's midnight and I've turned into something or other. Anyway, here's a couple of quotes I've saved from way back where;
Science
A set of cognitive and behavioral methods to describe and interpret observed or inferred phenomenon, past or present, aimed at building a testable body of knowledge open to rejection or confirmations.

Two major methodologies in the sciences
Experimental
Historical

Scientific paradigm
Framework(s) shared by most members of a scientific community, to describe and interpret observed or inferred phenomena, past or present, aimed at building a testable body of knowledge open to rejection or confirmation.

Paradigm shift
A new cognitive framework, shared by a minority in the early stages and a majority in the later, that significantly changes the description and interpretation of observed or inferred phenomena, past or present, aimed at improving the testable body of knowledge open to rejection or confirmation.

Scientific progress
The cumulative growth of a system of knowledge over time, in which useful features are retained and non-useful features are abandoned, based on the rejection or confirmation of testable knowledge.

and

"Theory without experience is mere intellectual play;
experience without theory is blind."
Immanuel Kant

Night All

DUDE!!! 🤔

That's a lot to take in while sipping hot chocolate and watching the USA bobsled 4-man team win the gold medal! Yes I know I'm watching a taped delay rather than live which a bummer but still nice to see the 1st win in 62 years.



Jim 🤖
"Life's hard; it's harder if you're stupid"
John Wayne

someoldguy

28 February 2010, 14:13

quote:

The damage caused by the .223 (5.56mm) "varmint" bullet was easily accounted for. Standard U.S. rifles generally had 12 inch rifling twists inside their barrels (one complete bullet rotation within 12 inches), whereas the AR-15, as designed by Stoner, was to have a 1 in 14 inch rifling twist, as rapid spraying of projectiles at close range would be the norm rather long range accuracy. However Colt, with its antiquated equipment, had made some of the AR-15s with up to 18 inches per total bullet rotation, thus creating a bullet's flight to wobble while en route to target. The impact of these projectiles on human flesh created horrible wounds; as well as very few prisoners of war.

Yes, Jim, that's exactly what I was thinking about! I was thinking the twist for the 5.56 was fast, but it was obviously slow. This was a case of "I know I've read *something* about it!" Thanks for jump starting my memory. 🤖

Glenn