

Antenna Forum Dayton 2009

Tips
Tricks
& Toolbox Things

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TIPS

Safety-related issues lead off this year...

If W2GD can suffer an accident...

FOCUS, use caution & think about moves.

Pre-Planning & Pre-visualization work,
along w/using the PROPER equipment/tools!

TIPS

- 2008/2009 seems to be my year for base-related tower issues.
- Six jobs (five 25G, one 45G) with rusted out legs/siderails!



Tower installed in 1978, little or no attention paid to base condition since



TIPS

- These are NOT load-rated devices! In other words, you don't even want to THINK about using them to hold up your tower!



Climbing to discover this does **NOT**
instill confidence...!





TIPS

- Another hardware store item...again, NOT what you want to use!



TIPS

- The proper thimble is known as a “heavy duty” thimble, identifiable by its distinctive shape.





TIPS

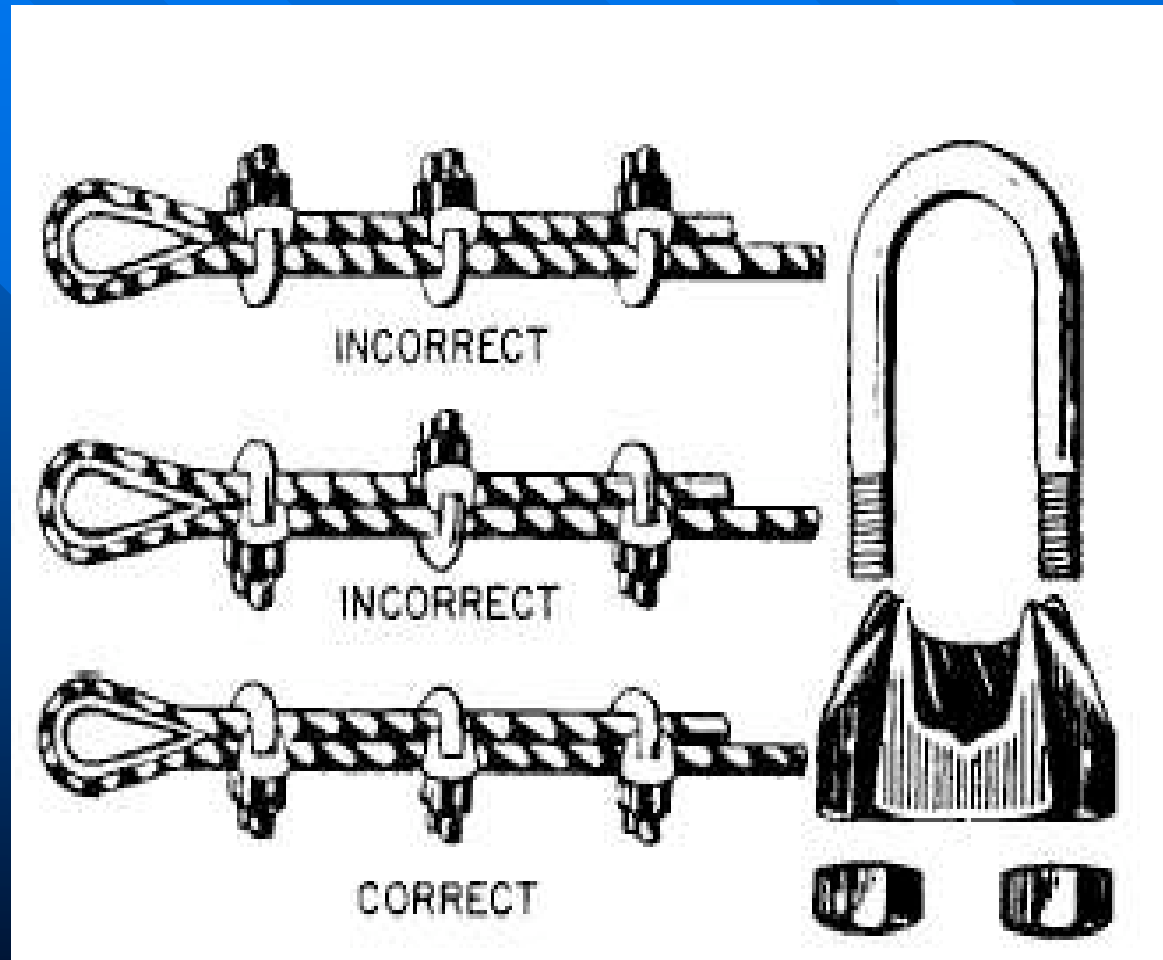
- The thimble “rule” for EHS is:

Say you’re using 3/16-inch guy cable, you’d use a 5/16 or even a 7/16-inch thimble (or 2X larger than the cable size...)

TIPS

- Attach the EHS with an Anchor Shackle
- Allows pre-making the guys
- Allows easy changes or repairs
- Quality shackles stamped with size/rating

If you must use Crosby Clips....



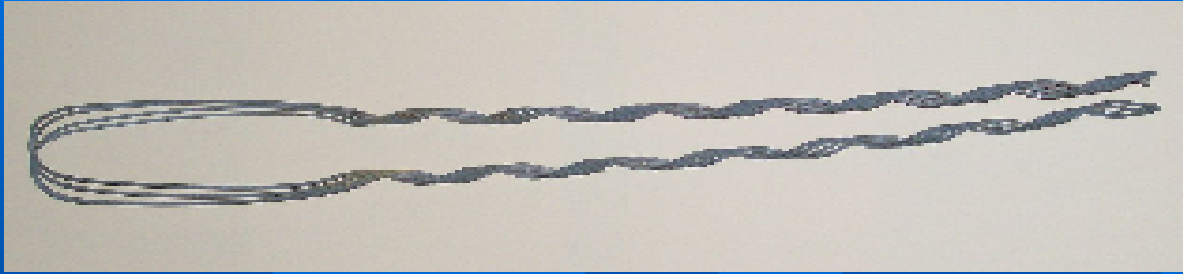
Use drop-forged clips, not malleable iron!

Improved design, yet almost unknown...

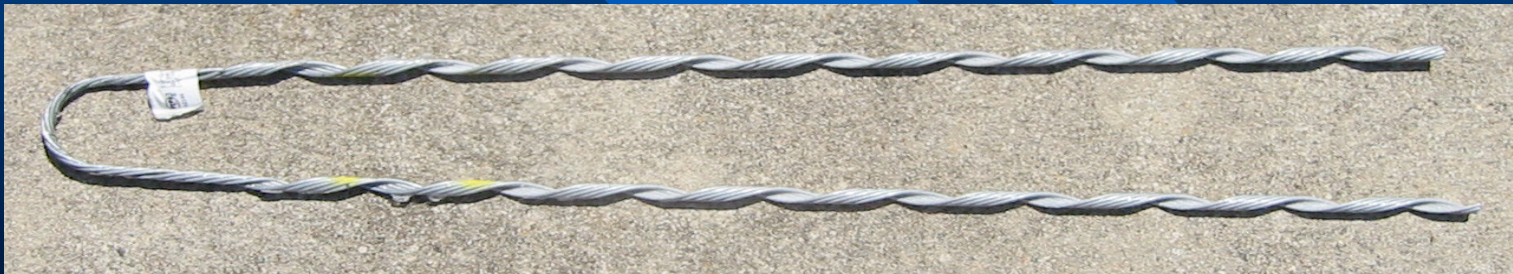


“Double Saddle Clip”

Instead, let's use Preformed Guy Grips!



Not this “utility company” Preform



“Big Grip” Preform (dead ends)

TRICKS

- Balancing Act for beams
 - Simple Scale—game fish weighing
 - Read out the weight required to balance
 - Insert that weight in boom (try to mount at the attachment point for the truss)
 - » Galvanized pipe, lead, small pieces of ground rod
 - » Secure w/expanding foam



Pull down on “lightside” of boom & read weight,
insert that amount securely inside the boom



TRICKS

- The SILICONE controversy
- “Releases acetic acid while curing”
- Known as outgassing—but is this truly bad?
(After all, if the acid is gaseous, & it does go away after a short period of time...?)

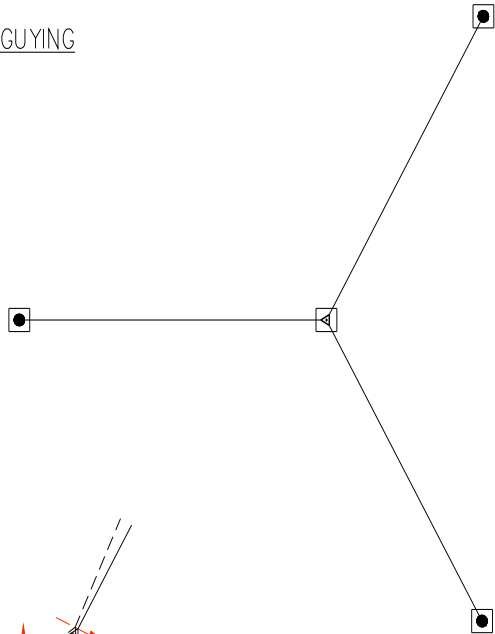




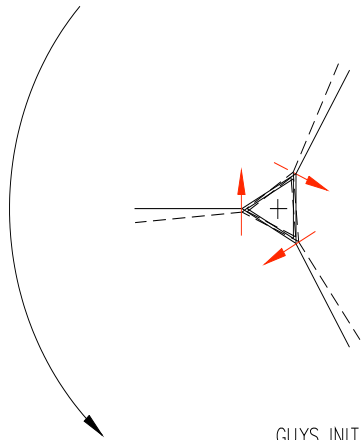
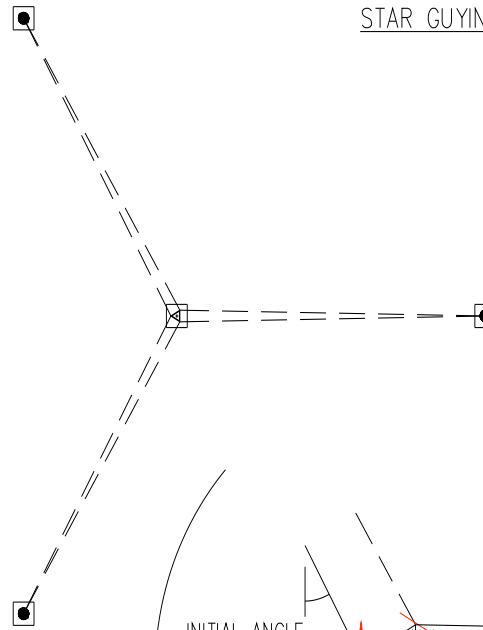
TRICKS

- Star Guying—serious guys for guys who have to guy
- Truly increases strength or load-carrying capacity of tower, as well as limiting the torsional torque (that twist we've all felt)!

NORMAL GUYING

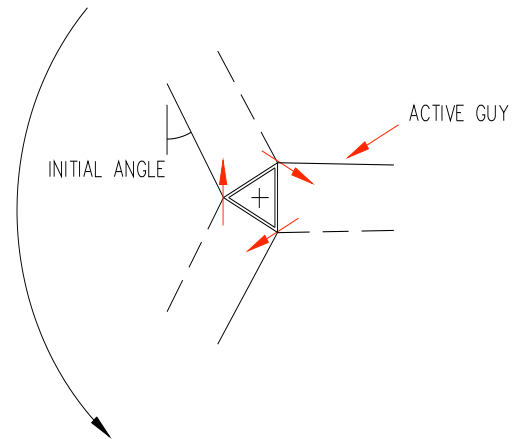


STAR GUYING



TORSIONAL FORCE ON TOWER

GUYS INITIALLY DO NOT HAVE FORCE VECTOR TO RESIST TORSION FORCE
TOWER HAS TO ROTATE TO DEVELOP RESISTING FORCE VECTOR



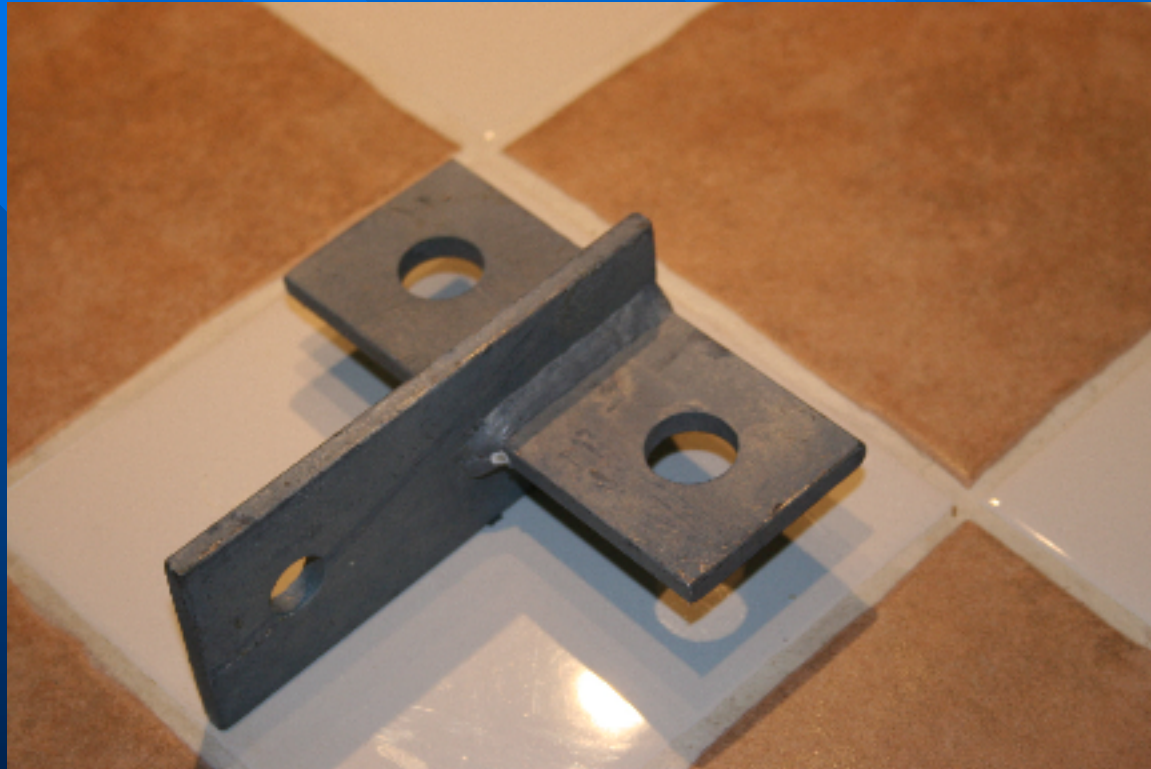
TORSIONAL FORCE ON TOWER

ACTIVE GUYS INITIALLY HAVE FORCE VECTOR TO RESIST TORSION FORCE
TOWER DOES NOT HAVE TO ROTATE TO DEVELOP RESISTING FORCE VECTOR

TRICKS

- But what about those “extra” guy wires & the Rohn EQ-plate?

Close look at commercial installations will show they merely “pile up” the guys, but their EQ plates are huge compared to 3-hole or 5-hole Rohn plates







TOOLBOX THINGS

■ GearWrench Tools

Manufacturer with some unique & clever tools—not only their Ratcheting Box-end wrenches!

ref: <http://www.gearwrench.com/>



TOOLBOX THINGS

- X-beam wrenches (standard & ratcheting)
- X-beam needle-nose
- Quadbox wrench (4 sizes in one handle)
- Pass-thru ratchets

*GearWrench tools are worth your attention
IMHO...*

TOOLBOX THINGS

Stanley's PROTO Needle-nose



TOOLBOX THINGS

RoboGrip pliers



TOOLBOX THINGS

Husky Rotating Ratchet



TOOLBOX THINGS

Wixey Gauge



TOOLBOX THINGS

Klein Swaging Punch



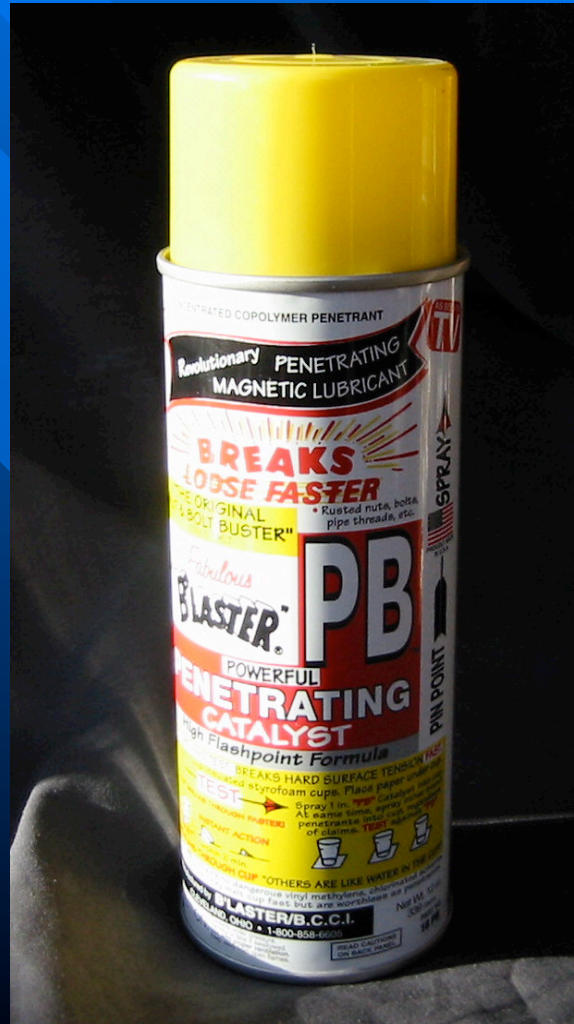
TOOLBOX THINGS

Hickey bars



TOOLBOX THINGS

PB Blaster



And finally...

[http://www.wd40.com/files/pdf/
wd-40_2042538679.pdf](http://www.wd40.com/files/pdf/wd-40_2042538679.pdf)

While not a huge fan of WD-40 (it is, after all, merely water-displacement Formula #40),

Thanks for your attention.

And, the kind remarks about my column
in the *National Contest Journal*...