

Tricks for safetying a rope or arbor

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For this tech note, I went looking around for a good way to secure ropes while you're working on them. Your initial instinct for a solution to this issue may be to simply tie off the ropes while you put on weight. This method, though, isn't really safe for a number of reasons.

First, tying two ropes together (called a 'bend' in sailor-ese) is usually not a good idea if it's avoidable, because it greatly weakens the ropes at the point of the knot. This is because the knot puts all of the stress of the load on a very small length of rope, *crosswise* to the grain of the rope. The rope will fail in this area long before it would fail anywhere else, and well before you reach the loading limit of the rope.

The second issue is that ropes tend to be tied to tie lines, which are often different sizes than the fly ropes. This mismatch can cause 'biting,' where the thinner rope actually cuts into the thicker one. Once again, this method greatly reduces the effective strength of the rope as a whole.

So what's a better solution? I found a nice one in that wonderful forum billboard, The Control Booth. The specific thread that I draw from is found here:

<http://www.controlbooth.com/postt580.html>

The solution that these experts offer is called dogging. As I understand it, it basically involves twisting two (or more) ropes around each other. The method for dogging is as follows: you take a pipe or some other rigid rod-like object, and you insert it between the ropes that you want to dog. Let's say these ropes are hanging vertically. You then take the pipe and spin it horizontally around in circles three or four times. This will cause the two ropes to twist around each other both above and below the pipe. These twists serve both to keep the ropes from slipping and to hold the dog pipe in place. The last step is to fasten the dog pipe to the steel fly structure. Once the pipe is locked down, the ropes are essentially locked.

This system is considerably better than tying off for a number of reasons. The most important issue is that the friction holding the ropes in place is distributed along a good foot or two of rope. As a result, it holds very well without weakening the rope overall. For similar reasons, this method will not damage the ropes like biting can. Also, this system is very easy to remove — you can either take off tension, or you can simply remove the dog pipe while under tension.

A few final notes about dogging. The dog pipe shouldn't be wood, because wood can splinter and damage the rope. Always make sure to put at least 3 twists in there, or else the dog pipe could slip out. And before you take the dog pipe out, make sure your weights aren't going to go flying!