Hydroformed C-5 Frame Rails *by Jim Stukenborg*

If one reads about the C-5 Corvette, the term hydroformed frame is usually mentioned. We are usually told that the process involves water under high pressure.

An informative exhibit at this year's Nashville celebration displayed the steps in this process to add a little clarification to the term. As you can see in the photo, the frame starts as large round tube long enough to make one frame rail. Next, the frame gets some conventional kinks to clear the front and rear suspension. The third step shows how the hydroforming changes the round tube into the finished rectangular profile with accompanying depressions and stiffening groves. This is done in a die that shapes the tube when the high pressure is injected into the capped tube.

The forth step has lasers to cutting the necessary holes for body mounts and etc. The next step would then be to weld in the necessary cross members. Corvette started it, then it was used on the GM pickups, and now the Ford F-150 is touting that they now have the strongest frame in truckdom using hydroforming.