

Tichy Train Group Tour, April 6, 2013

By Vic Bitleris

This past Saturday our Division, CPD13, had our (sort of) annual pilgrimage to Tichy Train Group, in Alamance, NC. Tichy Train Group is a manufacturer of Model Railroad kits and scratchbuilding supplies and parts. Don Tichy, the proprietor, very graciously allows us to come for a visit to tour his factory and purchase his goodies at a decent discount. This is our 3rd tour to Tichy Train Group.

There were about 30 of us from the MER that came this past Saturday. There is some confusion that the Model Railroad products Don makes is not his primary income, but that he does some work for the medical industry. Don's wife corrected this confusion and said that there are a few items Don makes for the medical industry, but he is phasing that out, because his real love is Model Trains and his PRIMARY business is the Train Group.

We started the visit by entering the shop where model parts are normally packaged into the boxes and bags we get when we buy these items. For Saturday, this was nicely transformed into a sales area and Mrs. Tichy provided coffee, juice and bagels. That was really nice. I think she was buttering us up to buy more things, though that was not necessary. Men in a model train store are probably worse than our fairer sex in a shoe store.

Here are some photos of our entry and prior to actually starting the tour on the factory floor.



That is Mrs. Tichy in the center. On the right are some of the guys checking out parts.

Here is a photo of the parts display.



Some of the guys looking to see which kits they want to buy.



Here is the laser making the glass windows.



Don gave us a tour of his factory floor and lab where all the good stuff takes place. Here Don is explaining how the injection molding process works. He is showing his smallest machine with the safety covers removed so we can see it operate. This machine was spitting out ore car sides.





This is a better photo of Don and one of his machines.
The styrene is injected in at about 450 degrees F. The pressure to inject is about 2 tons and once injected the die is cooled with 45 degree water, then ejected.
Here is a photo of the ejected parts, ore car sides.



Here are some photos of Don's other machines.



Notice the crane in the photo above. It says 4,000 lbs.



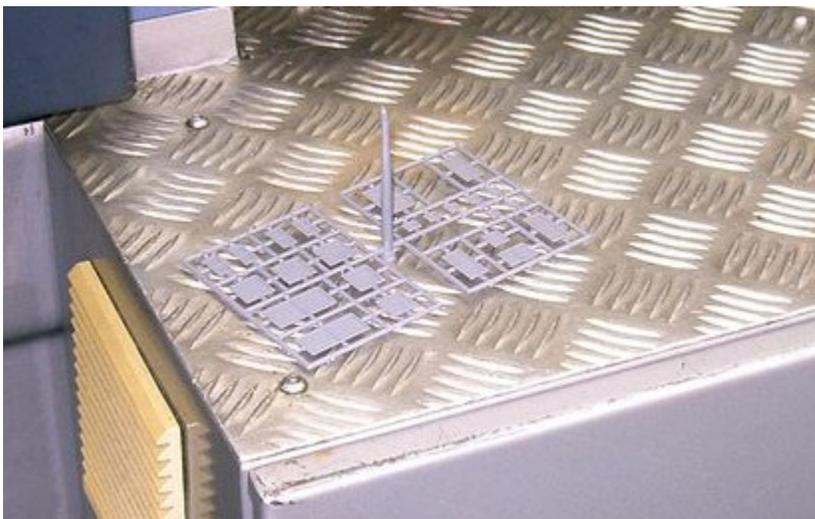
Don uses that crane to install and remove molds. Some of them weigh up to 600 or more lbs. That is a bit more than Don can physically wrestle in and out the machines.

One of the nice things about the styrene Don uses is that it can be recycled into new stuff. He takes the various waste sprues and runners and puts them into a grinding machine where they become pellet fodder to be used in new parts manufacturing. Don says the styrene he uses can be recycled like this pretty much indefinitely. Some of the other plastics used, such as the nylon for the truck bearings on the arch bar trucks for the crane have a one time shot and may not be reheated. They turn into formaldehyde when reheated and cause all kinds of problems with the equipment. In fact, when doing injection molding of these types of parts, the operator watches the machine closely to insure no jams occur. Overheating causes the gas pressure from the formaldehyde to rise rapidly.

Here is a photo of some runners that have had parts removed from them. These will be ground up and used to make new parts.



Here is a photo of a finished runner with the sprue attached.



The sprue is the long thing sticking up by itself. The things sitting on the machine with the parts attached is called a runner. Don explained this. Us modelers call runners, sprues.

Here is one of Don's bigger machines making parts for the cooling tower.



This is one of the heavier molds that probably weighs about 600 lbs.

Don also has a lab area where he maintains and creates the molds. It is a time consuming painstaking job that can only be called a labor of love. Don is by education, an Electrical Engineer, but has become a self taught master machinist and tool maker. He has some very cool machine equipment in his lab. His most favorite machines are the CNC mill and a specialized grinder from Germany that he uses to make very fine tooling to be used in the CNC mill.

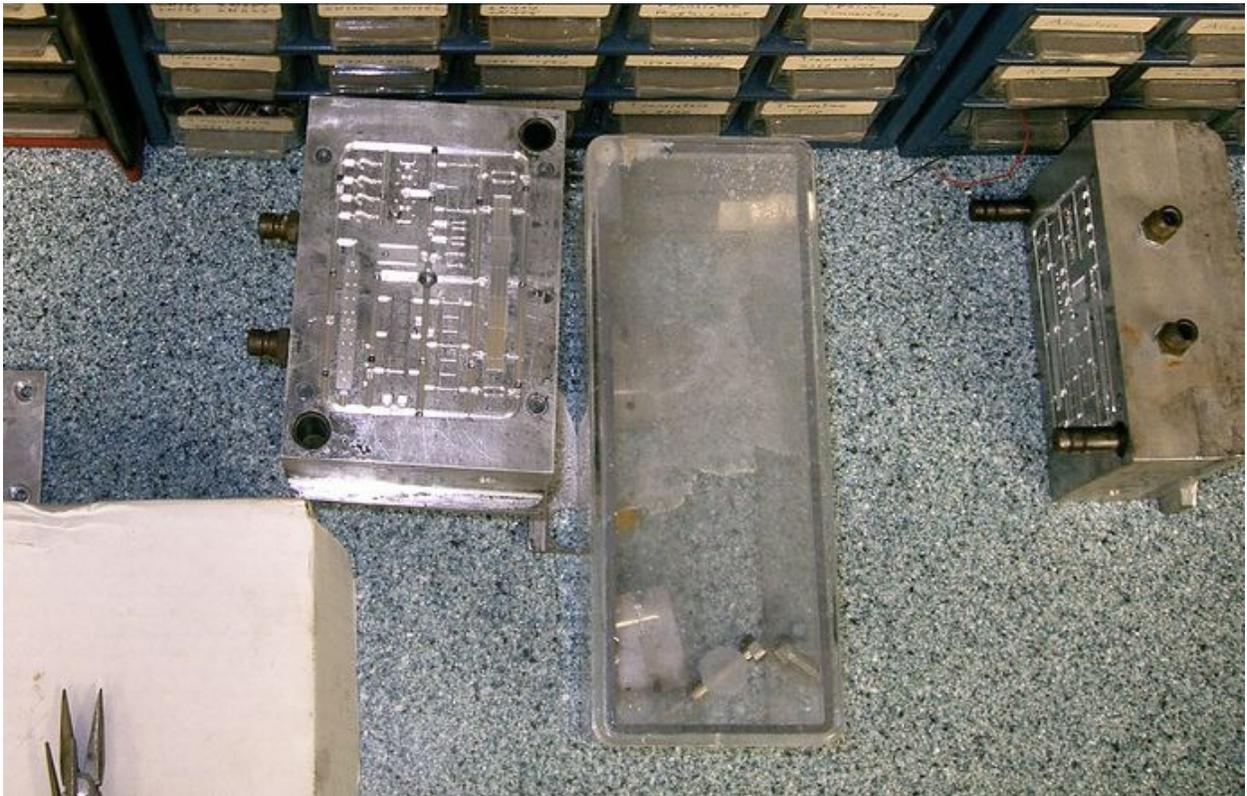
The CNC mill once setup and ready to go can run for many hours, anywhere from 12 to about 30 hours, or more, depending on the complexity of the mold it is cutting. Don does all of the CNC programming himself. He showed us the program he wrote while aboard an airplane when he went to visit his son in California. The particular code he showed us makes windows that were requested by one of the Craftsman Kit manufacturers.

Here are some lab photos.

Don is explaining the operation of the CNC mill behind him.



Here are some dies that need maintenance.



The dies above have some ejector issues. Sometimes they need cleaning and lubing to prevent getting damaged.

Many of the dies for his rolling stock kits initially came from a fellow named Bill Gould, but Don also added to the inventory and keeps on adding. Don got more heavily involved into making doors and windows for the Craftsman Kits when a bunch of manufactures ganged up on him and begged him to make doors and windows for them, because they could not get what they need to be able to ship their kits. Don gets regular request for new windows and doors and not only does he provide them for the Craftsman Kit manufacturers, but we also get to buy them.

I showed a photo of the Laser machine that makes the glass for all of the Tichy windows and doors on page 3. Don purchased this and started providing glass just a few years ago. If you have a large number of windows or doors in your inventory that do not have glass, but you would like some, and if you know the part numbers, you may send an email to Don at Tichy Train Group,

<http://www.tichytraingroup.com/>

Don will try to provide these at a reasonable cost for a limited period of time.

Don also showed us a pad printing process he uses for his painted and lettered items. This was a really cool thing, since I have never seen a pad printer before. He also has wire straighteners, since he sells various sizes of wire us modelers need. He uses phosphor bronze, because it is more flexible than brass and doesn't break as easily as brass does. Phosphor bronze solders just as easily as brass does, so there is no loss of that feature.

All in all it was a great trip and we all had a wonderful time. I am hoping we get to do these kinds of trips in years to come as well.

We are very blessed to have Don Tichy here in North Carolina. He plans on making the kits and parts for us for a few years yet. He is a very young 60 years old.