

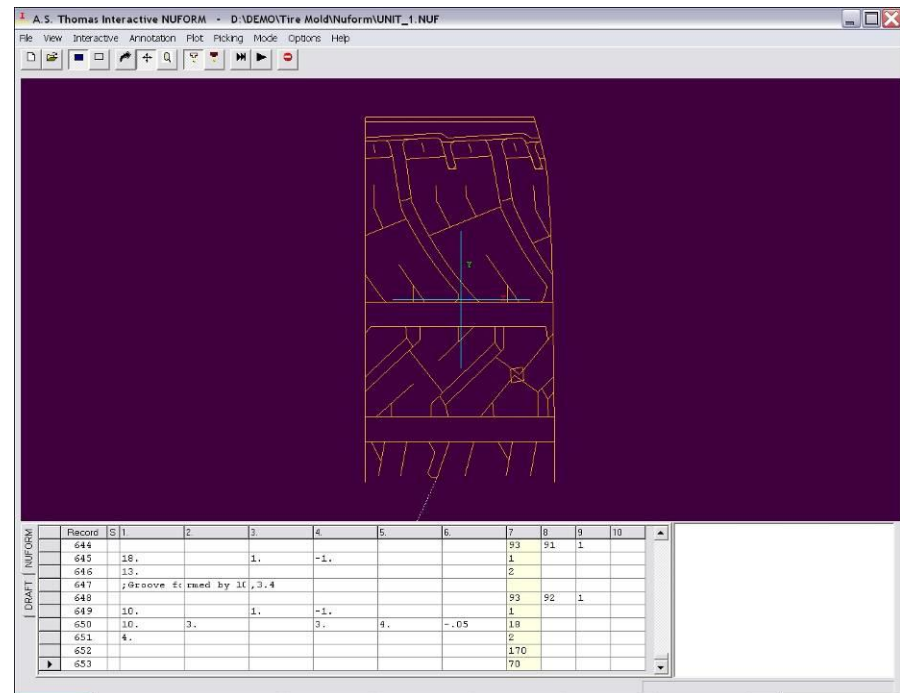


NUFORM System

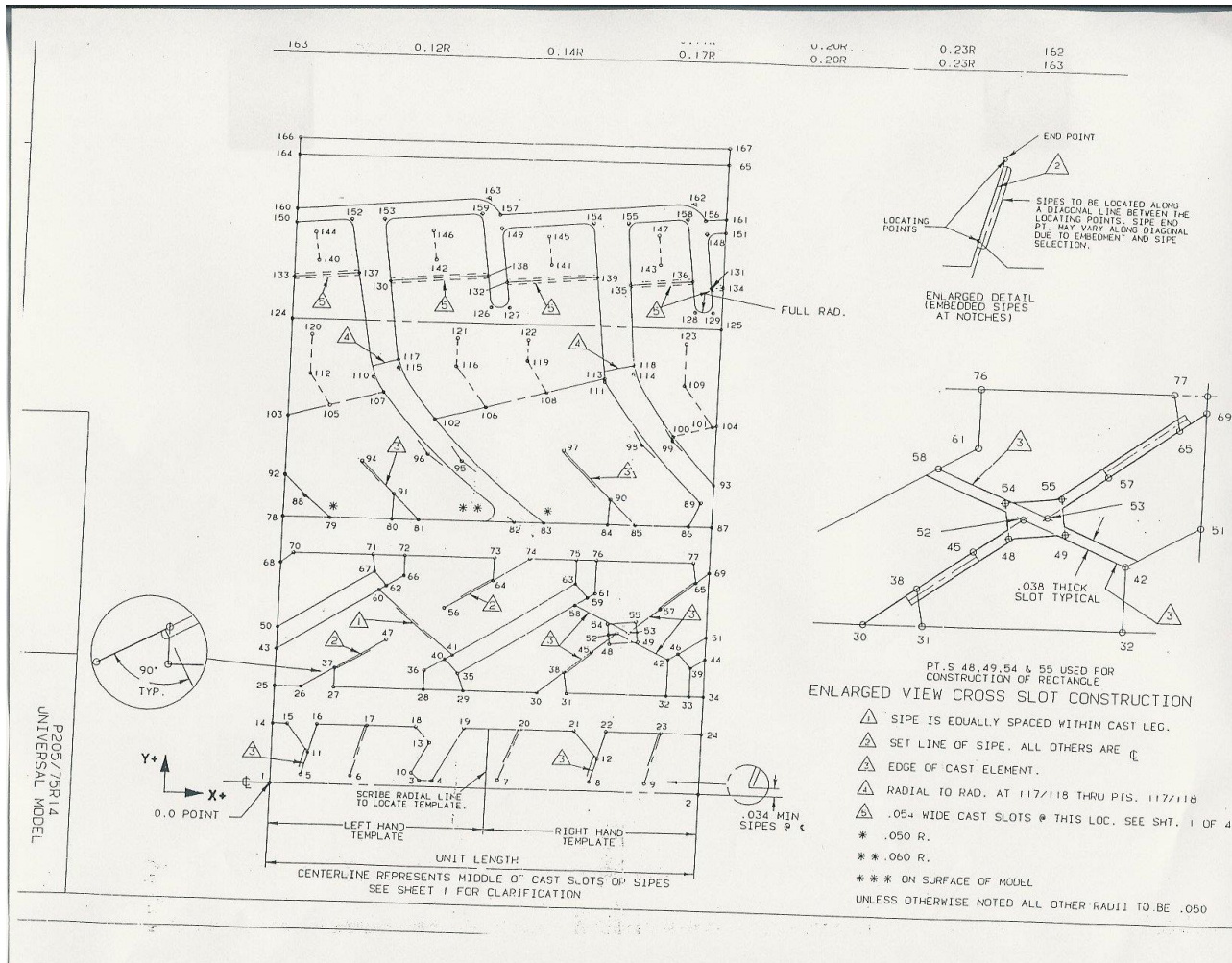
Tire Mold
For
Passenger Car
All Weather Tire

Process Steps

- NUFORM Level-I
 - Generate inner tire contour
 - Generate outer Tire profile
 - Generate Tread layout



Tread Definition (Drawing)



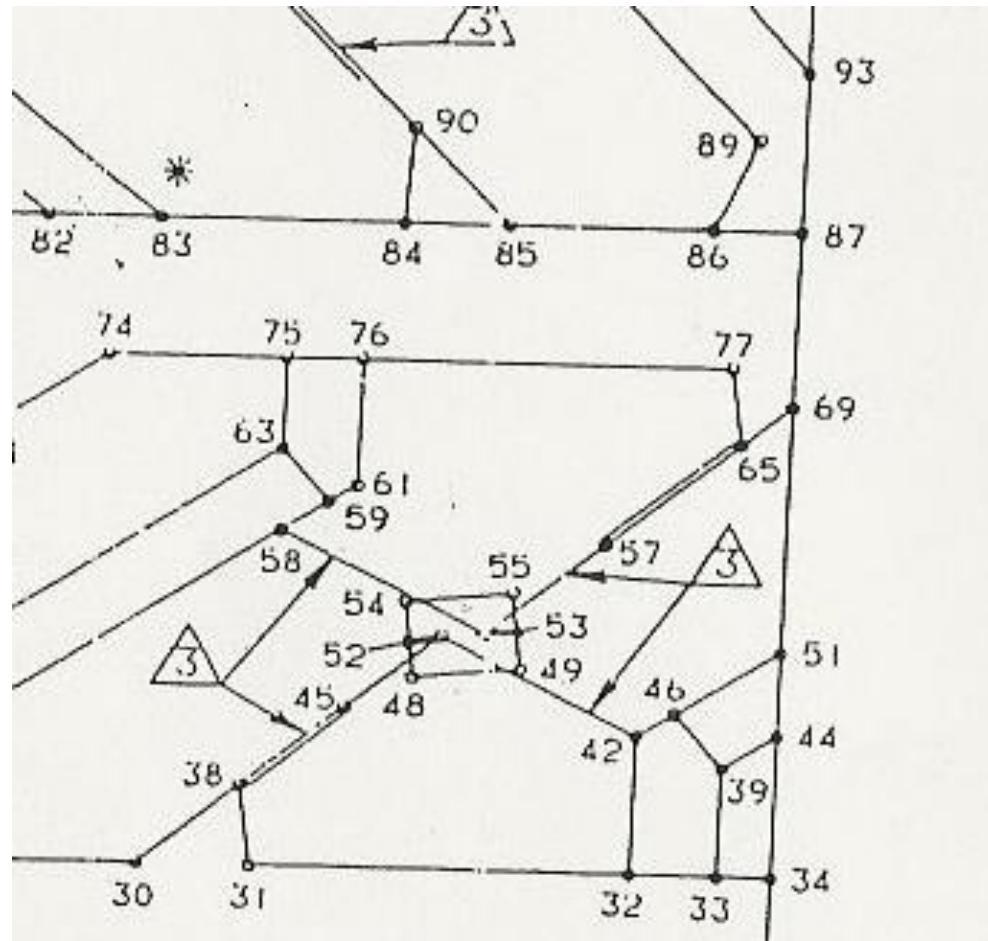
Codepoints

CHORD OF ARC INCLUDES 0.750 BASE

PT #	ARC	UNIT 1		UNIT 2		UNIT 3		UNIT 4		UNIT 5		PT #	
		X-CONTR	X-CHORD	X-CONTR	X-CHORD	X-CONTR	X-CHORD	X-CONTR	X-CHORD	X-CONTR	X-CHORD		
1	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1	
2	0.000	0.750	1.855	1.853	2.087	2.085	2.319	2.316	2.551	2.547	2.783	2.778	2
3	0.042	0.792	0.648	0.648	0.730	0.730	0.811	0.811	0.892	0.892	0.973	0.973	3
4	0.042	0.792	0.701	0.701	0.789	0.789	0.877	0.877	0.965	0.964	1.052	1.052	4
5	0.059	0.809	0.129	0.129	0.145	0.145	0.161	0.161	0.177	0.177	0.194	0.194	5
6	0.059	0.809	0.345	0.345	0.388	0.388	0.431	0.431	0.475	0.475	0.518	0.518	6
7	0.059	0.809	0.976	0.975	1.098	1.097	1.220	1.219	1.342	1.341	1.464	1.463	7
8	0.059	0.809	1.381	1.380	1.553	1.552	1.726	1.725	1.899	1.897	2.071	2.069	8
9	0.059	0.809	1.618	1.617	1.820	1.819	2.023	2.021	2.225	2.222	2.427	2.424	9
10	0.091	0.841	0.613	0.613	0.689	0.689	0.766	0.766	0.842	0.842	0.919	0.919	10
11	0.206	0.956	0.156	0.156	0.175	0.175	0.195	0.195	0.214	0.214	0.234	0.234	11
12	0.214	0.964	1.409	1.408	1.585	1.584	1.761	1.760	1.937	1.936	2.114	2.111	12
13	0.293	1.043	0.683	0.683	0.768	0.768	0.854	0.853	0.939	0.939	1.024	1.024	13
14	0.396	1.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14
15	0.396	1.146	0.061	0.061	0.069	0.069	0.077	0.077	0.084	0.084	0.092	0.092	15
16	0.396	1.146	0.190	0.190	0.214	0.214	0.238	0.238	0.262	0.262	0.286	0.286	16
17	0.396	1.146	0.406	0.406	0.457	0.457	0.508	0.508	0.559	0.559	0.610	0.609	17
18	0.396	1.146	0.622	0.622	0.700	0.700	0.778	0.778	0.856	0.855	0.933	0.933	18
19	0.396	1.146	0.824	0.824	0.927	0.927	1.030	1.030	1.133	1.133	1.237	1.236	19
20	0.396	1.146	1.063	1.063	1.196	1.196	1.329	1.329	1.462	1.462	1.595	1.594	20
21	0.396	1.146	1.303	1.302	1.465	1.465	1.628	1.627	1.791	1.790	1.954	1.952	21
22	0.396	1.146	1.441	1.441	1.622	1.622	1.802	1.801	1.982	1.980	2.163	2.160	22
23	0.396	1.146	1.678	1.677	1.888	1.887	2.098	2.096	2.308	2.305	2.518	2.514	23
24	0.396	1.146	1.854	1.853	2.086	2.084	2.318	2.315	2.550	2.546	2.782	2.777	24
25	0.645	1.395	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25
26	0.645	1.395	0.112	0.112	0.126	0.126	0.140	0.140	0.154	0.154	0.168	0.168	26
27	0.645	1.395	0.255	0.255	0.287	0.287	0.319	0.319	0.351	0.351	0.383	0.383	27
28	0.645	1.395	0.646	0.646	0.727	0.727	0.808	0.808	0.889	0.889	0.970	0.970	28
29	0.645	1.395	0.811	0.811	0.912	0.912	1.014	1.014	1.115	1.115	1.217	1.216	29
30	0.645	1.395	1.130	1.130	1.271	1.271	1.413	1.412	1.554	1.553	1.695	1.694	30
31	0.645	1.395	1.260	1.260	1.418	1.417	1.576	1.575	1.733	1.732	1.891	1.889	31
32	0.645	1.395	1.693	1.692	1.904	1.903	2.116	2.114	2.328	2.326	2.540	2.536	32
33	0.645	1.395	1.791	1.790	2.015	2.013	2.239	2.237	2.463	2.460	2.687	2.683	33
34	0.645	1.395	1.853	1.851	2.084	2.082	2.316	2.313	2.548	2.544	2.780	2.774	34
35	0.759	1.508	0.785	0.785	0.883	0.883	0.982	0.981	1.080	1.080	1.178	1.178	35
36	0.771	1.521	0.646	0.646	0.727	0.727	0.808	0.808	0.888	0.888	0.969	0.969	36
37	0.773	1.523	0.255	0.255	0.287	0.287	0.319	0.319	0.351	0.351	0.383	0.383	37
38	0.784	1.533	1.244	1.244	1.400	1.399	1.556	1.555	1.711	1.710	1.867	1.865	38
39	0.833	1.563	1.790	1.788	2.014	2.012	2.237	2.235	2.461	2.458	2.685	2.681	39
40	0.848	1.597	0.726	0.726	0.817	0.817	0.908	0.908	0.999	0.998	1.089	1.089	40
41	0.879	1.629	0.759	0.759	0.854	0.854	0.949	0.949	1.044	1.044	1.139	1.139	41
42	0.885	1.634	1.691	1.690	1.902	1.901	2.114	2.112	2.326	2.322	2.537	2.533	42
43	0.891	1.640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	43
44	0.891	1.640	1.851	1.849	2.082	2.080	2.314	2.311	2.545	2.541	2.777	2.771	44
45	0.919	1.668	1.355	1.355	1.525	1.524	1.695	1.693	1.864	1.863	2.034	2.032	45
46	0.923	1.672	1.731	1.729	1.947	1.945	2.164	2.161	2.380	2.377	2.597	2.592	46
47	0.969	1.718	0.474	0.474	0.533	0.533	0.592	0.592	0.651	0.651	0.711	0.711	47
48	0.978	1.727	1.434	1.433	1.614	1.613	1.793	1.792	1.972	1.970	2.152	2.149	48
49	0.998	1.747	1.554	1.553	1.749	1.747	1.943	1.941	2.137	2.135	2.332	2.329	49
50	1.035	1.784	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
51	1.035	1.784	1.849	1.848	2.080	2.078	2.312	2.309	2.543	2.539	2.774	2.769	51
52	1.049	1.798	1.462	1.461	1.645	1.644	1.828	1.826	2.011	2.009	2.194	2.191	52
53	1.057	1.806	1.514	1.513	1.703	1.702	1.892	1.891	2.082	2.079	2.271	2.268	53

SYSTEMS DATE 08/17/92 TIRECL SYSTEM REV TSP - 518
 P1233A018 P205/75R14 P1028-92 A UNIVERSAL III
 BASE UNIT#P1233AB DETAIL 1 10474AU

Tread Schematic (Detail)



Codepoint (Detail)

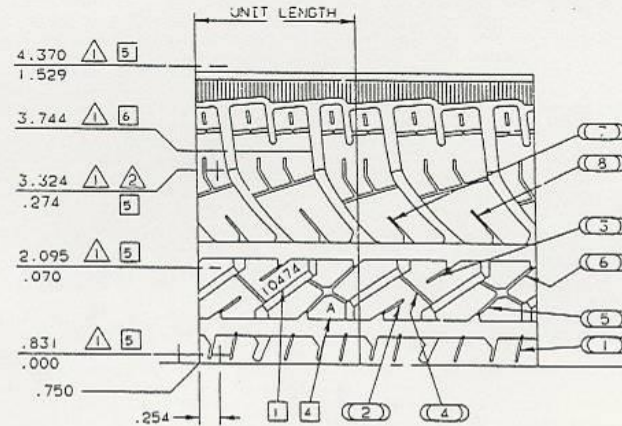
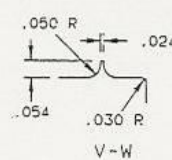
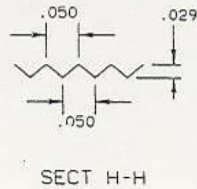
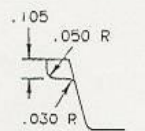
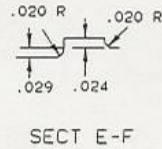
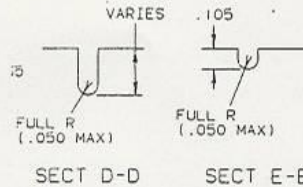
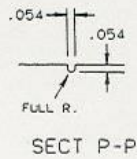
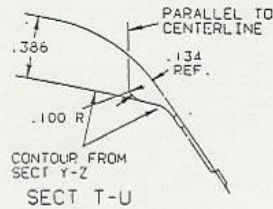
CHORD OF ARC INCLUDES 0.750 BASE

PT #	ARC	CHORD OF ARC	UNIT 1		UNIT 2		UNIT 3		UNIT 4		UNIT 5		PT #
			X-CONTR	X-CHORD	X-CONTR	X-CHORD	X-CONTR	X-CHORD	X-CONTR	X-CHORD	X-CONTR	X-CHORD	
1	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1
2	0.000	0.750	1.855	1.853	2.087	2.085	2.319	2.316	2.551	2.547	2.783	2.778	2
3	0.042	0.792	0.648	0.648	0.730	0.730	0.811	0.811	0.892	0.892	0.973	0.973	3
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9	0.059	0.809	1.618	1.617	1.820	1.819	2.023	2.021	2.225	2.222	2.427	2.424	9
10	0.091	0.841	0.613	0.613	0.689	0.689	0.766	0.766	0.842	0.842	0.919	0.919	10
11	0.206	0.956	0.156	0.156	0.175	0.175	0.195	0.195	0.214	0.214	0.234	0.234	11
12	0.214	0.964	1.409	1.408	1.585	1.584	1.761	1.760	1.937	1.936	2.114	2.111	12
13	0.293	1.043	0.683	0.683	0.768	0.768	0.854	0.853	0.939	0.939	1.024	1.024	13
14	0.396	1.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14
15	0.396	1.146	0.061	0.061	0.069	0.069	0.077	0.077	0.084	0.084	0.092	0.092	15
16	0.396	1.146	0.190	0.190	0.214	0.214	0.238	0.238	0.262	0.262	0.286	0.286	16
17	0.396	1.146	0.406	0.406	0.457	0.457	0.508	0.508	0.559	0.559	0.610	0.609	17
18	0.396	1.146	0.622	0.622	0.700	0.700	0.778	0.778	0.856	0.855	0.933	0.933	18
19	0.396	1.146	0.824	0.824	0.927	0.927	1.030	1.030	1.133	1.133	1.237	1.236	19
20	0.396	1.146	1.063	1.063	1.196	1.196	1.329	1.329	1.462	1.462	1.595	1.594	20
21	0.396	1.146	1.303	1.302	1.465	1.465	1.628	1.627	1.791	1.790	1.954	1.952	21
22	0.396	1.146	1.441	1.441	1.622	1.621	1.802	1.801	1.982	1.980	2.163	2.160	22
23	0.396	1.146	1.678	1.677	1.888	1.887	2.088	2.086	2.288	2.285	2.488	2.484	23

Tread Details

SYSTEMS DATE 08/17/92

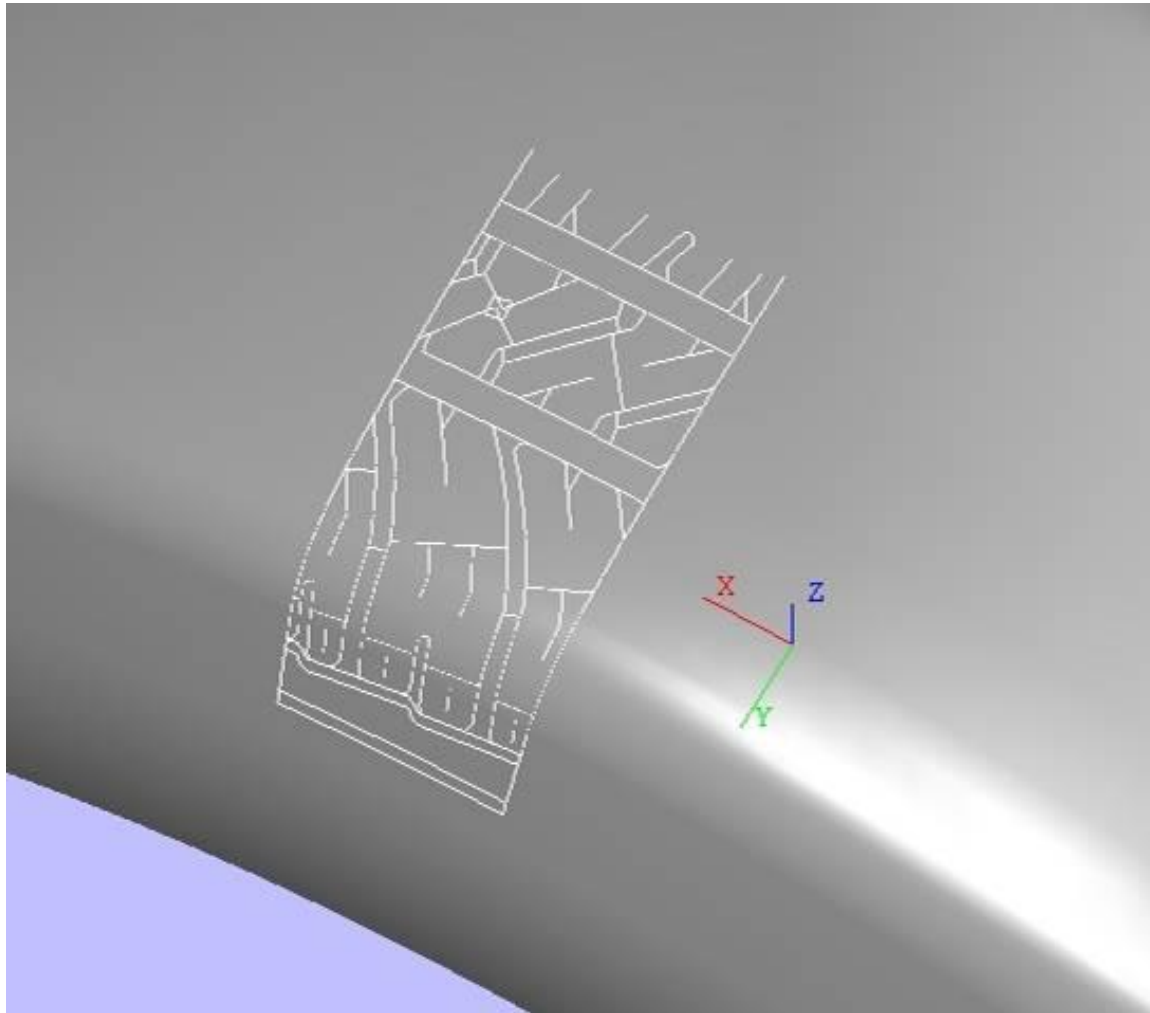
ABOVE LINE NOTATION DENOTES CHORD INCLUDING OFFSET.
BELOW LINE NOTATION DENOTES DPCP.



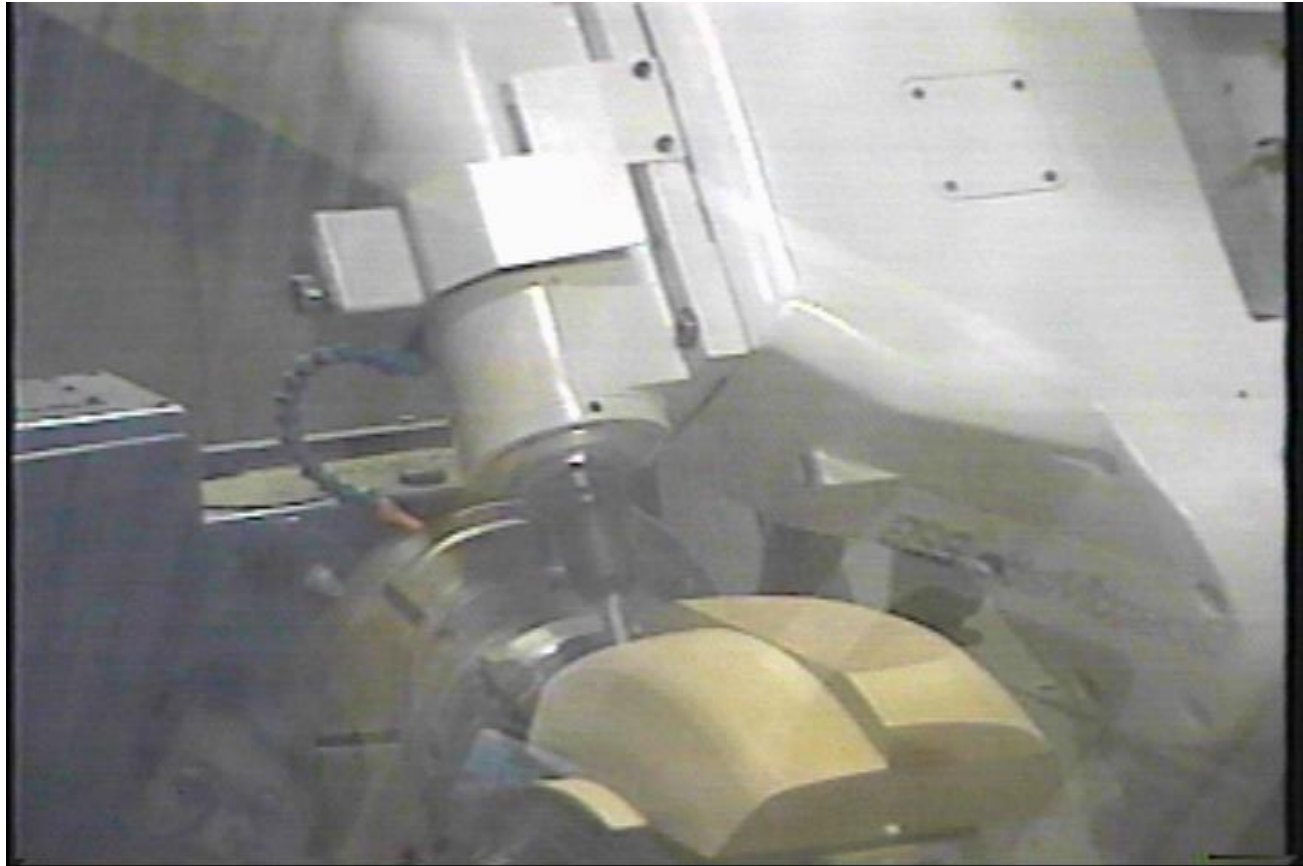
(8)	1580-J	1580-J	1580-J	1580-J	1580-J
(7)	1503-BC	1503-BC	1503-BC	1503-BC	1503-BC
(6)	2384-H	2384-H	2384-H	2384-J	2384-J
(5)	2384-F	2384-F	2384-F	2384-G	2384-G
(4)	1505-KG	1505-KG	1505-KG	1505-KJ	1505-KJ
(3)	2383-C	2383-C	2383-C	2383-D	2383-D
(2)	2383-B	2383-B	2383-B	2383-E	2383-E
(1)	2382-C	2382-C	2382-C	2382-C	2382-C
POSITION	#1	#2	#3	#4	#5

FULL RAD. $\frac{1}{2}$.038

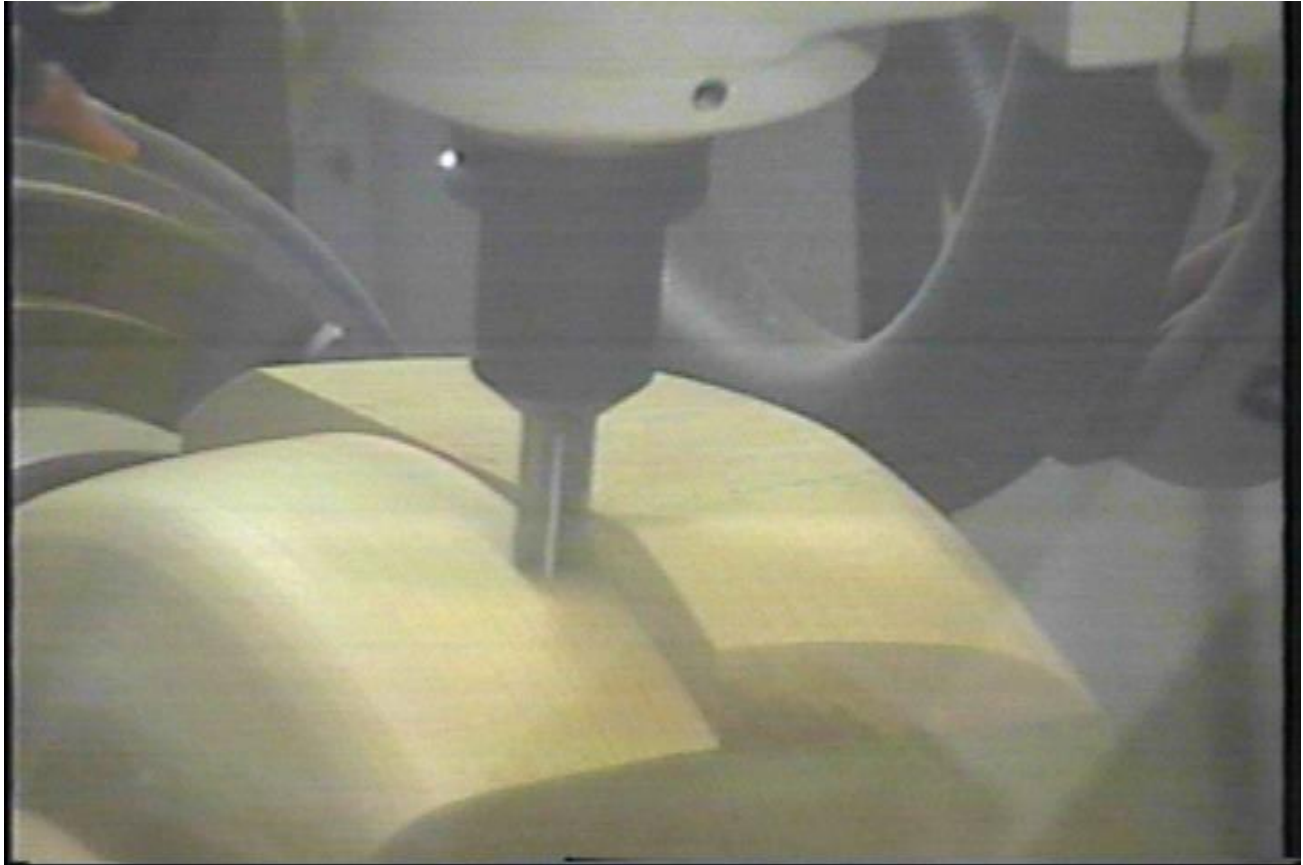
Tread Pattern after L2PREP



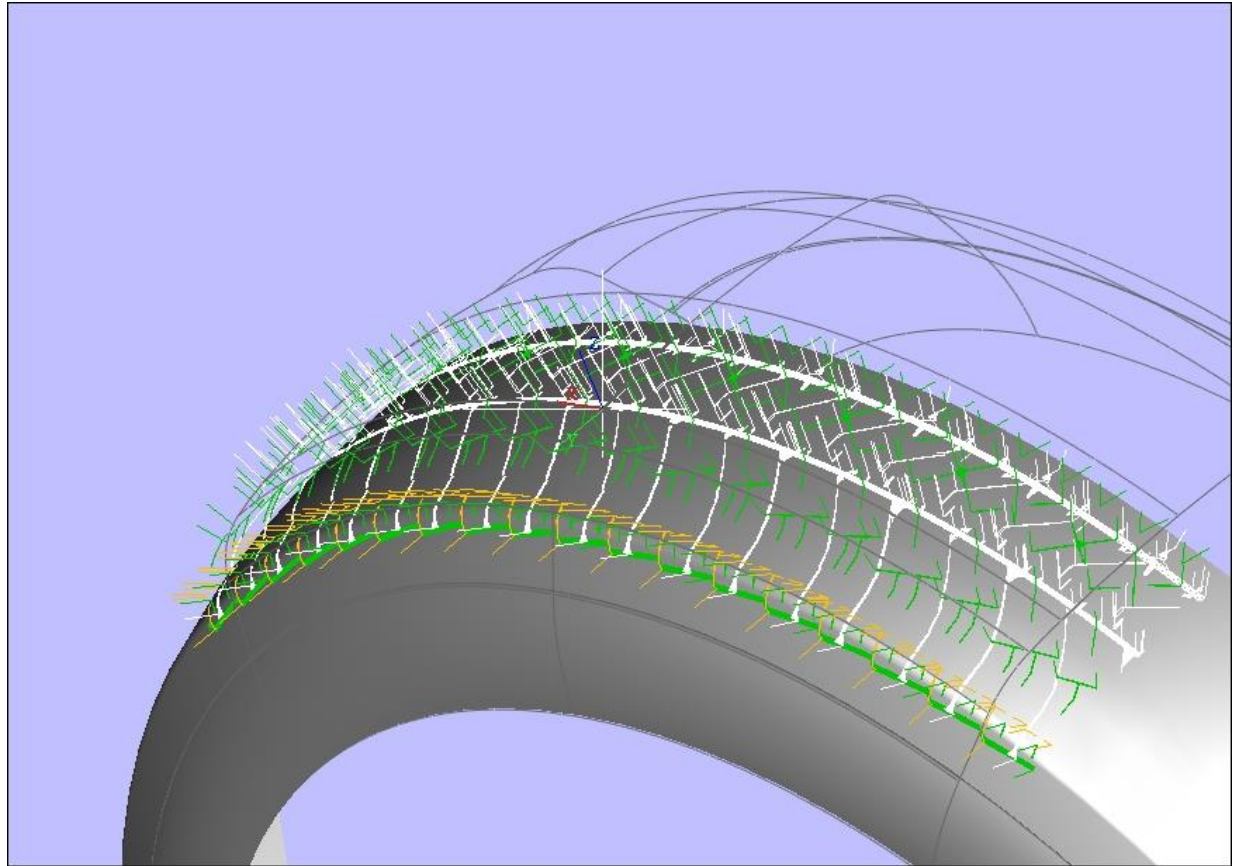
Roughing Raw Stock



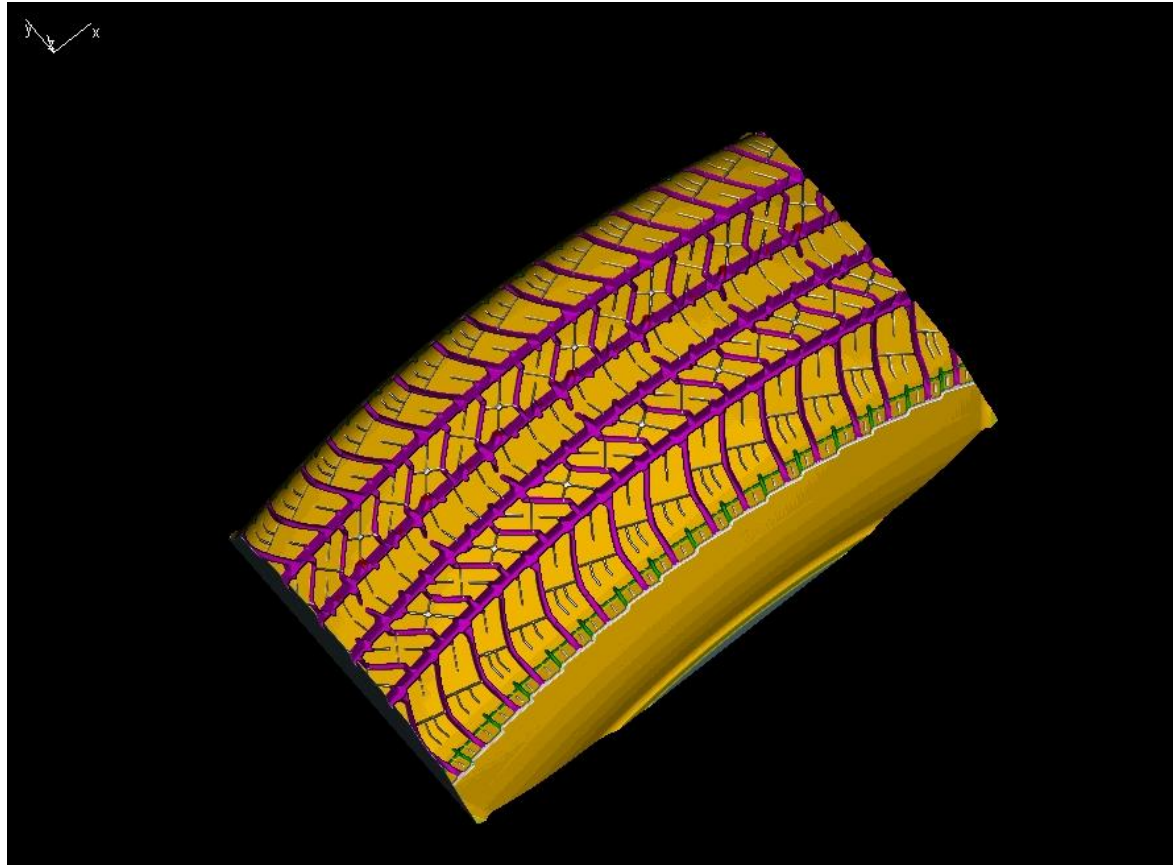
Roughing Raw Stock (cont.)



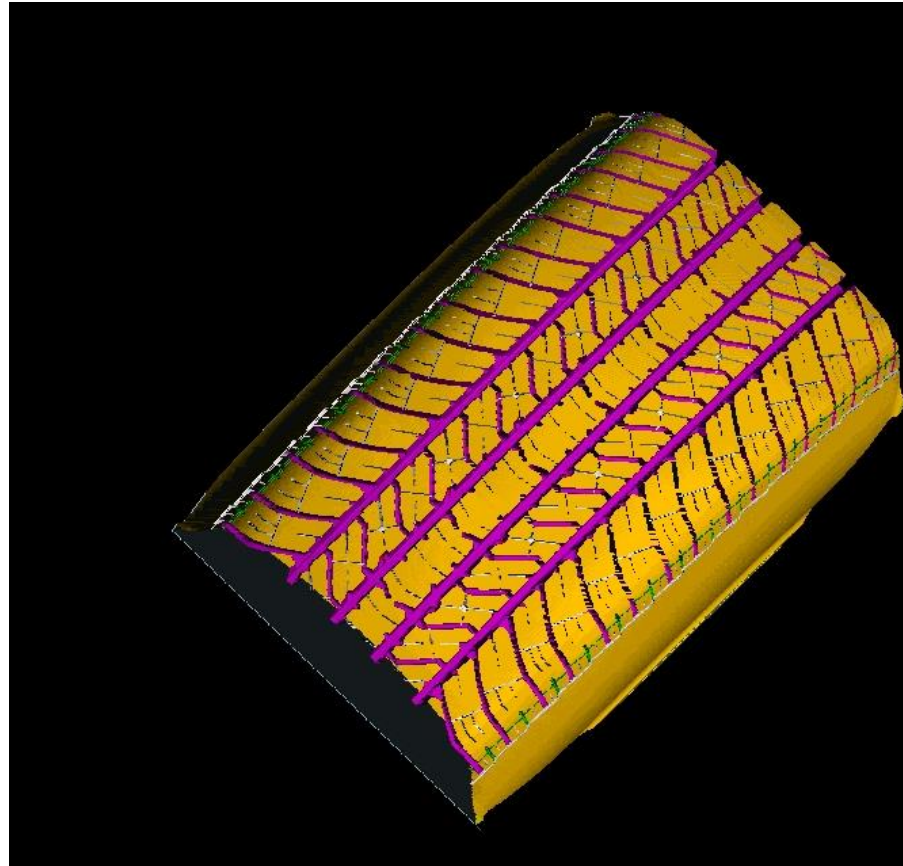
Top Tread Machining



Solid Model



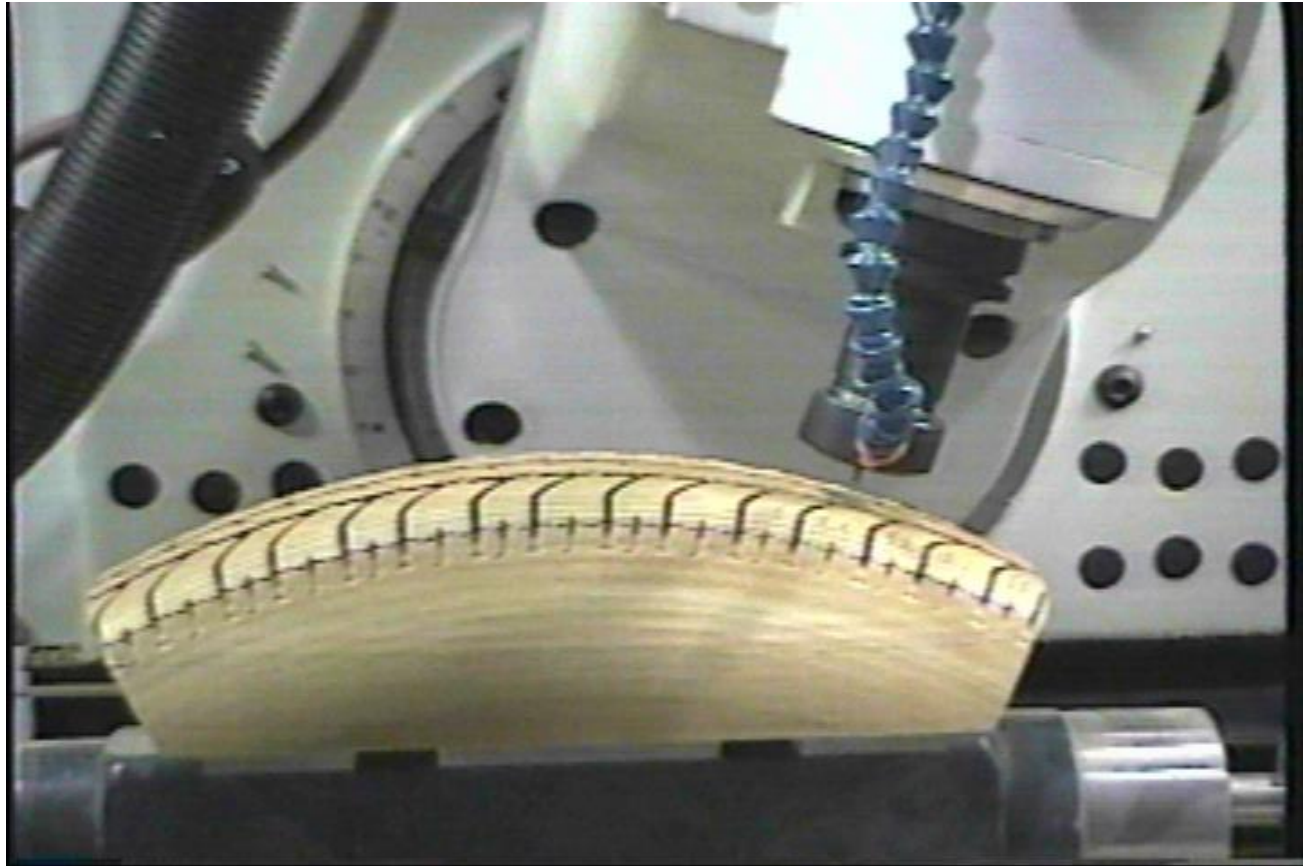
Solid Model (cont.)



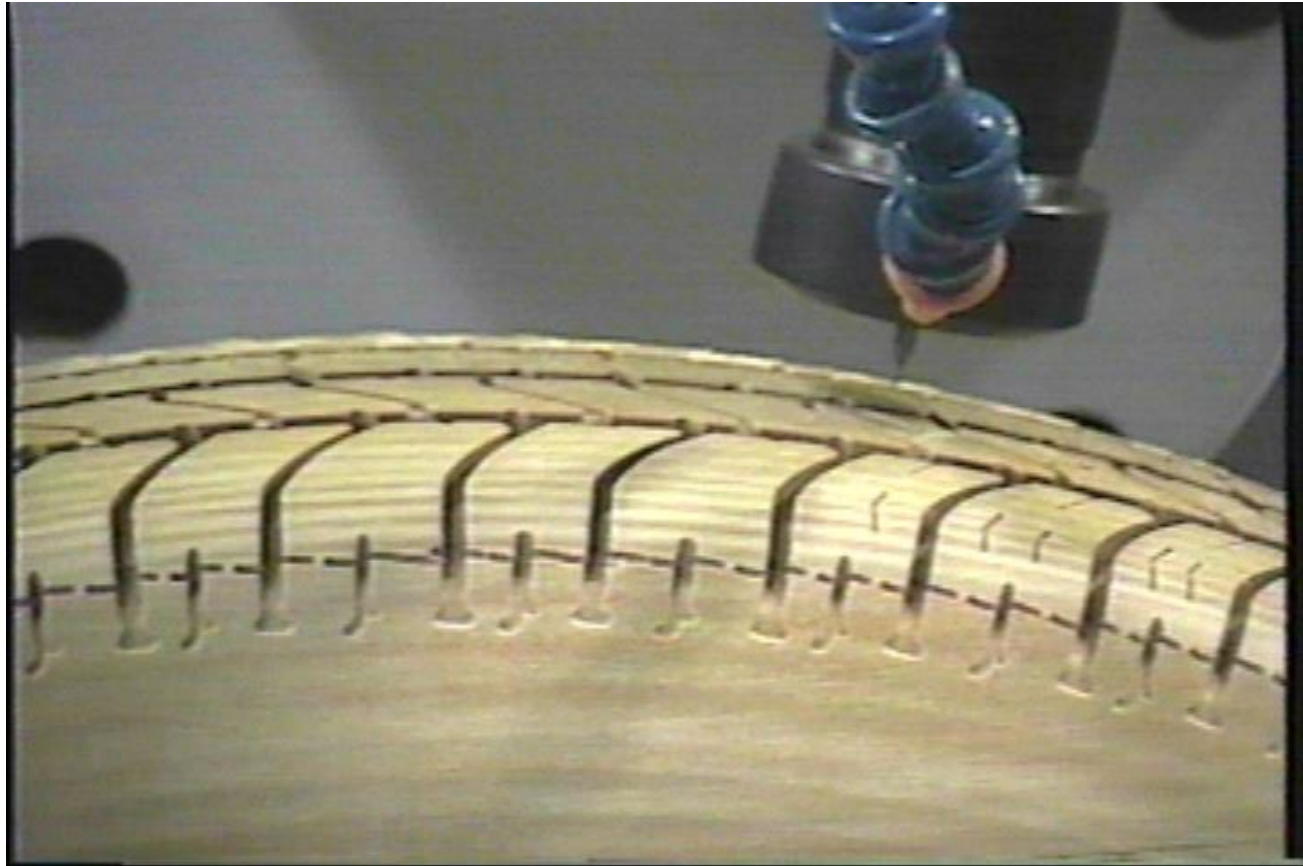
Machining



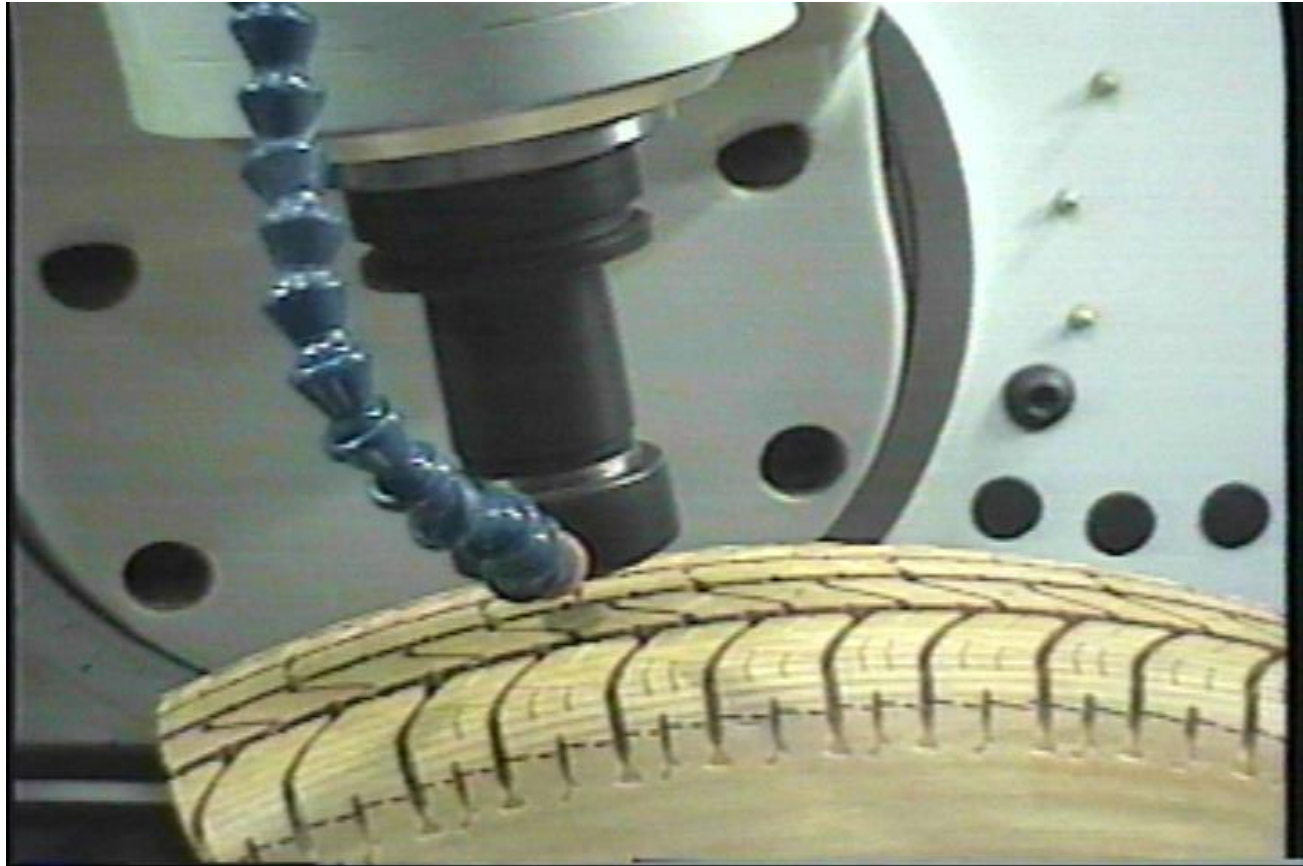
Machining (cont.)



Machining (cont.)



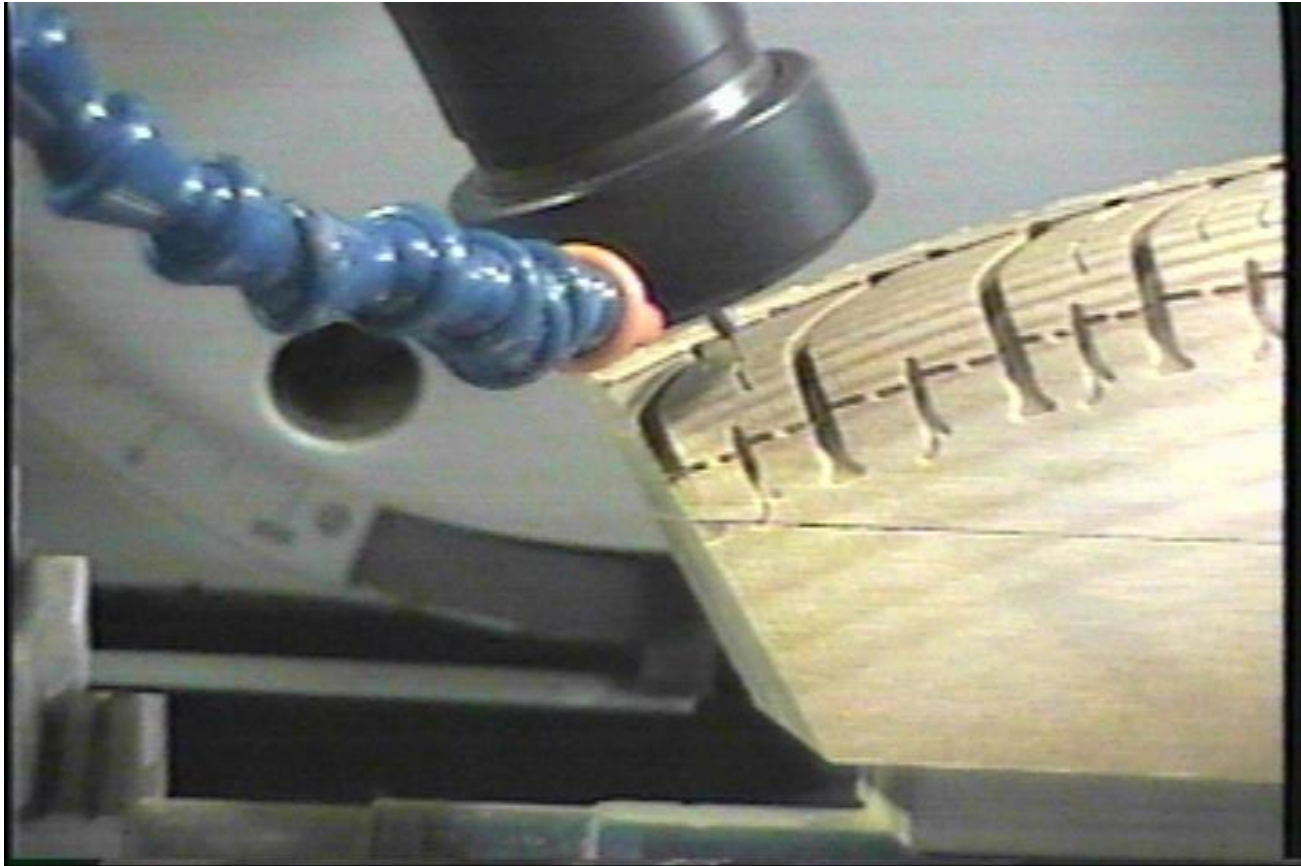
Machining (cont.)



Machining (cont.)



Machining (cont.)



Machining (cont.)



Finished Part



Universal Mold Master 12 Section Clam Shell

