Fig. 1

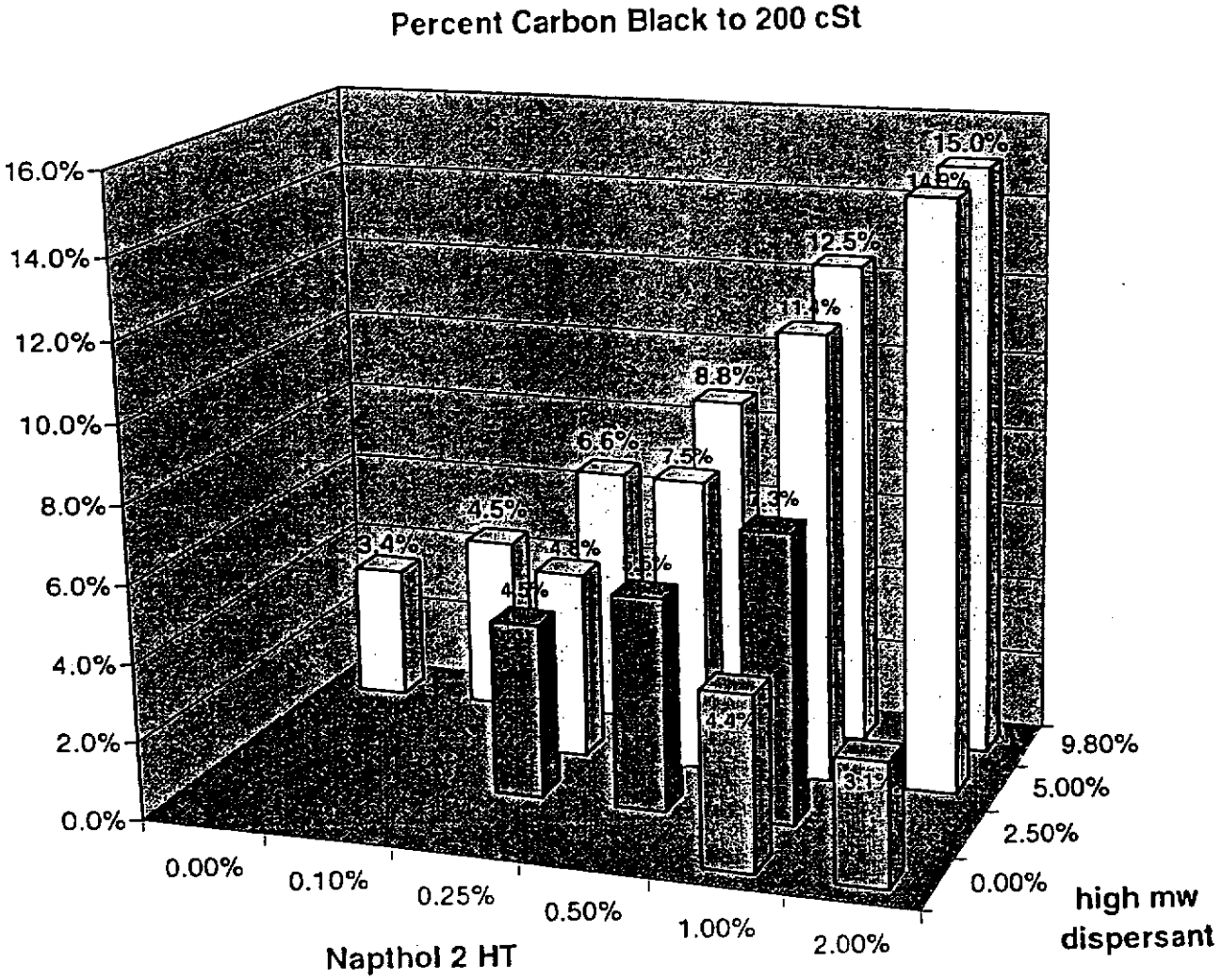

Percent Carbon Black to 200 cSt
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
3.4%
4.5%
6.6%
7.5%
8.8%
12.5%
15.0%
0.00%
0.10%
0.25%
0.50%
1.00%
2.00%
Napthol 2 HT
0.00%
2.50%
5.00%
9.80%
high mw
dispersant

Fig. 2

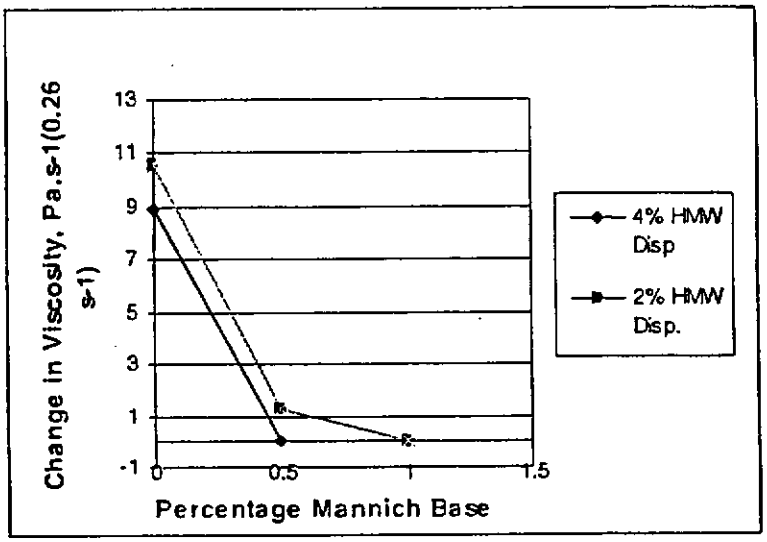
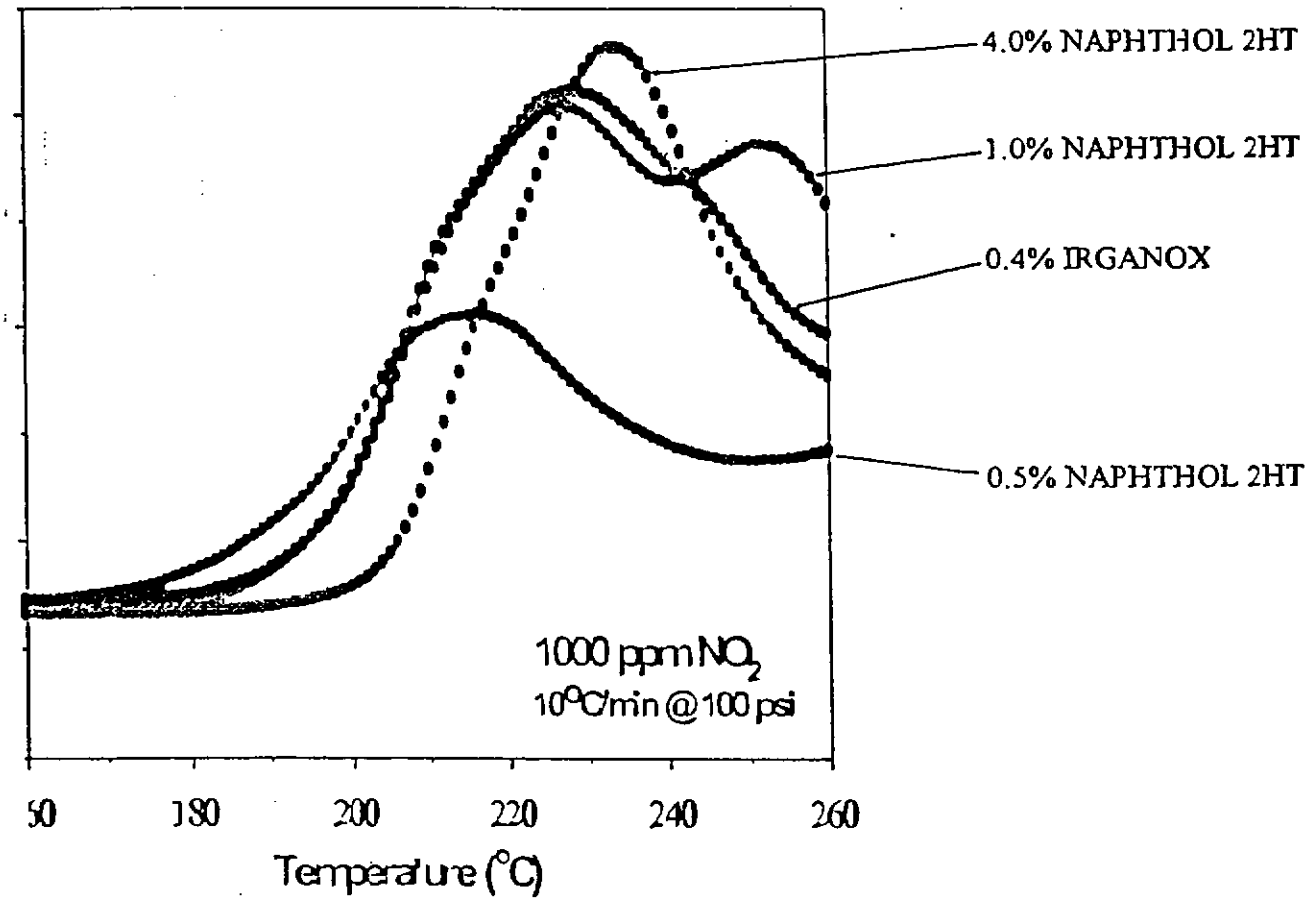

Change in Viscosity, Pa.s-1(0.26 s-1)
13
11
9
7
5
3
1
-1
0
0.5
1
1.5
Percentage Mannich Base
4% HMW Disp
2% HMW Disp.

Fig. 3


4.0% NAPHTHOL 2HT
1.0% NAPHTHOL 2HT
0.4% IRGANOX
0.5% NAPHTHOL 2HT
1000 ppm NO2
10°C/min @100 psi
50
180
200
220
240
260
Temperature (°C)