Table I contains the data used to obtain the calibration curve of Fig. 2. Kerosene, a light mineral oil, and a series of four graded oils of viscosity S.A.E. No. 10, No. 20, No. 30, and No. 40, respectively, were used as calibrating liquids. The values of the kinematic viscosities of these liquids were directly determined at 100°F by Mr. C. E. Fink of our Petroleum Refining Laboratory. The author is indebted to him for carefully checking the viscosities in the standard viscometers of that laboratory. The density of the ball and the densities of the calibrating oils were determined in a conventional manner by weighing in specific gravity bottles.

Table II summarizes the data that were derived by computation. They were obtained graphically by plotting on a large scale the computed values of μ against pressure, drawing smooth curves through the plotted points, and then reading from the curves the values of μ corresponding to every one or two thousand units of pressure. The principal sources of error in these data are in the determination of the pressures and the roll times. The average inaccuracy of the former amounts to about 1 percent, while the latter, expressed in the unit of coefficient of viscosity, may be as high as 3 percent when the roll time is as low as 2 or 3 seconds. Another way of estimating the erratic error in the determinations is to consider the deviations of the computed values of μ from the curves that were

TABLE II. *Viscosity-pressure data.*

Pressure (lb./in.²)	Viscosity in Centipoises		
	Penn.	Okla.	Cal.
100°F			
14.2	83	94	114
1000	91	119	146
2000	106	145	183
3000	123	175	225
4000	145	209	278
5000	169	247	346
6000	198	293	433
7000	232	344	533
8000	268	405	655
9000	310	475	811
10×10^3	357	557	995
12	485	775	1540
14	654	1060	2200
16	850	1430	
18	1100	1940	
20	1420		
22	1830		

TABLE II (*Continued*).

Pressure (lb./in.²)	Viscosity in Centipoises		
	Penn.	Okla.	Cal.
130°F			
14.2	41	43	42
1000	51	54	57
2000	60	66	68
3000	64	75	80
4000	73	85	99
5000	82	95	124
6000	91	102	154
7000	100	118	190
8000	111	131	232
9000	124	149	281
10×10^3	143	170	340
12	191	231	490
14	249	318	692
16	315	428	960
18	408	564	1320
20	524	740	1830
22	663	940	2510
24	830	1170	3400
26	1030	1500	4540
28	1260	2030	
30	1560	2840	
32	1960		
34	2460		
210.2°F			
14.2	7	10	13
1000	9	12	15
2000	10	14	17
3000	13	16	19
4000	15	18	21
5000	17	20	24
6000	19	22	25
7000	20	24	27
8000	22	27	30
9000	24	30	33
10×10^3	26	33	37
12	31	40	45
14	36	50	55
16	44	59	70
18	52	71	90
20	62	85	116
22	73	104	153
24	87	128	202
26	103	154	260
28	123	185	327
30	145	219	408
32	171	262	510
34	202	314	655
36	242	375	846
38	287	454	1080
40	337	549	1400
42	393	654	1790
44	457	770	2270
46	535	890	2890
48	627	1010	
50	732	1150	
52	846	1290	
54	973	1430	