tegrated, and the determination of the coefficient of ultimate resilience must rest on direct observation of the material under test.

The Committee of the American Society of Civil Engineers also recommend that the specified per cent. of contraction in area shall be $\frac{2,800,000}{\text{Ultimate strength}}$.

The values specified by this formula have been calculated, and are given in column 9 for the purpose of comparison with the observed percentages of contraction in area.

	MARK.	Cross-section in inches.	Yield Point in pds. per sq. in.	Ultimate Strength in pds. per sq. in.	Per cent. of Elongation in 8 ins.	Per cent. of contraction in area.	$\frac{1,500,000}{f}$	$\frac{1,800,000}{f-10,000}-10$	$\frac{2,800,000}{f}$
Lengthwise.	1 A......	2x·372	38,770	51,100	32·	59·5	29·3	33·9	55·
	3 A......	2x·373	38,200	51,100	36·3	64·5	29·3	33·9	55·
	5 A......	2x·373	39,400	53,550	30·5	55·3	28·	31·4	52·3
	Average.........		38,800	51,900	32·9	59·7	29·	33·1	54·
Crosswise.	2 A......	2x·382	41,230	58,180	25·5	50·2	25·8	27·5	48·2
	4 A......	2x·385	38,180	55,400	27·5	56·8	27·2	29·8	50·5
	6 A......	2x·384	38,400	55,730	30·	51·3	27·	29·3	50·4
	Average.........		39,270	56,430	27·7	52·7	26·6	28·8	49·6
Lengthwise.	1 B......	2x·362	41,000	51,800	28·1	54·0	29·	33·	54·2
	3 B......	2x·365	40,550	51,900	28·1	53·5	29·	33·	54·
	5 B......	2x·369	40,900	52,600	30·5	58·0	28·6	32·3	53·3
	Average.........		40,800	52,100	28·9	55·2	28·8	32·8	53·8
Crosswise.	2 B......	2x·384	39,850	53,100	28·1	57·0	28·3	31·8	52·8
	4 B......	2x·384	38,600	52,400	30·	57·5	28·7	32·5	53·4
	6 B......	2x·383	38,800	52,900	28·8	57·5	28·5	32·0	53·
	Average.........		39,100	52,800	29·6	57·3	28·5	32·1	53·1