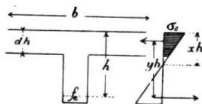
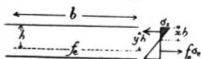


# Cabele

pentru verificarea pieselor de beton armat



Formule :  $a = \frac{\sigma_e}{\sigma_b}$

$p = \frac{f_e}{h b}$

$\sigma_e = \frac{M}{f_e y h}$

$\sigma_b = \frac{\sigma_e}{a}$

## I. DALE

$p$	$x$	$y$	$a$
0.0010	0.159	0.947	79.5
0.0015	0.191	0.937	63.6
0.0020	0.216	0.928	54.4
0.0025	0.238	0.921	48.0
0.0030	0.258	0.914	43.1
0.0035	0.276	0.908	39.4
0.0040	0.292	0.903	36.5
0.0045	0.306	0.898	34.0
0.005	0.319	0.894	32.0
0.006	0.343	0.886	28.6
0.007	0.365	0.878	26.1
0.008	0.385	0.872	24.0

$p$	$x$	$y$	$a$
0.009	0.402	0.866	22.3
0.010	0.418	0.861	20.9
0.012	0.446	0.851	18.6
0.014	0.471	0.843	16.8
0.016	0.493	0.836	15.4
0.018	0.513	0.829	14.2
0.020	0.531	0.823	13.2
0.025	0.569	0.810	11.4
0.03	0.600	0.800	10.0
0.04	0.649	0.784	8.1
0.05	0.685	0.772	6.8

## I. GRINZI T.

 $p = 0,0010$ 

$d$	$x$	$y$	$a$
0.05	0.250	0.976	45.0
0.08	0.192	0.965	68.1
0.10	0.174	0.957	71.2
0.12	0.165	0.952	75.9
0.14	0.160	0.948	78.7
0.159	0.159	0.947	79.5

 $p = 0.0015$ 

$d$	$x$	$y$	$a$
0.05	0.327	0.976	30.8
0.08	0.250	0.963	45.0
0.10	0.224	0.955	51.9
0.12	0.208	0.948	57.1
0.14	0.199	0.943	60.4
0.16	0.194	0.939	62.3
0.18	0.191	0.937	63.6
0.191	0.191	0.937	63.6

 $p = 0.0020$ 

$d$	$x$	$y$	$a$
0.05	0.300	0.976	23.5
0.08	0.302	0.962	34.7
0.10	0.269	0.954	40.8
0.12	0.248	0.946	45.5
0.14	0.234	0.940	49.1
0.16	0.225	0.935	51.7
0.18	0.220	0.931	53.2
0.20	0.217	0.928	54.2
0.216	0.216	0.928	54.4

 $p = 0.0025$ 

$d$	$x$	$y$	$a$
0.05	0.442	0.976	18.9
0.08	0.347	0.962	28.2
0.10	0.309	0.953	33.6
0.12	0.284	0.945	37.8
0.14	0.267	0.938	41.1
0.16	0.255	0.932	43.8
0.18	0.246	0.927	46.0
0.20	0.242	0.923	47.0
0.22	0.239	0.921	47.8
0.238	0.238	0.921	48.0

$p = 0.0030$ 

$d$	$x$	$y$	$a$
0.05	0.487	0.976	15.8
0.08	0.386	0.962	23.8
0.10	0.345	0.953	28.5
0.12	0.317	0.945	32.3
0.14	0.296	0.937	35.6
0.16	0.282	0.931	38.2
0.18	0.272	0.925	40.2
0.20	0.265	0.920	41.6
0.22	0.261	0.916	42.6
0.24	0.259	0.914	42.9
0.258	0.258	0.914	43.1

 $p = 0.0035$ 

$d$	$x$	$y$	$a$
0.05	0.524	0.976	13.6
0.08	0.421	0.962	20.6
0.10	0.377	0.953	24.8
0.12	0.346	0.944	27.4
0.14	0.323	0.936	31.4
0.16	0.307	0.929	33.9
0.18	0.295	0.923	35.8
0.20	0.287	0.918	37.3
0.22	0.282	0.914	38.2
0.24	0.278	0.910	39.0
0.26	0.276	0.909	39.4
0.276	0.276	0.908	39.4

 $p = 0.0040$ 

$d$	$x$	$y$	$a$
0.05	0.556	0.976	12.0
0.08	0.451	0.961	18.3
0.10	0.406	0.952	21.9
0.12	0.373	0.944	25.2
0.14	0.349	0.936	27.9
0.16	0.331	0.929	30.2
0.18	0.318	0.922	32.2
0.20	0.308	0.916	33.7
0.22	0.301	0.911	35.0
0.24	0.296	0.907	35.7
0.26	0.293	0.905	36.2
0.28	0.292	0.904	36.5
0.292	0.292	0.903	36.5

 $p = 0.0045$ 

$d$	$x$	$y$	$a$
0.05	0.585	0.975	10.6
0.08	0.479	0.963	16.3
0.10	0.433	0.952	19.6
0.12	0.399	0.944	22.6
0.14	0.372	0.935	25.3
0.16	0.352	0.928	26.9
0.18	0.338	0.921	29.4
0.20	0.326	0.915	31.0
0.22	0.318	0.909	32.2
0.24	0.312	0.905	33.1
0.26	0.309	0.901	33.6
0.28	0.307	0.899	33.8
0.30	0.306	0.898	34.0
0.306	0.306	0.898	34.0

$p = 0.005$ 

$d$	$x$	$y$	$a$
0.05	0.610	0.975	9.6
0.08	0.584	0.961	14.7
0.10	0.457	0.952	17.9
0.12	0.422	0.943	20.6
0.14	0.394	0.935	23.0
0.16	0.374	0.927	25.0
0.18	0.358	0.920	26.9
0.20	0.345	0.914	28.4
0.22	0.336	0.908	29.6
0.24	0.329	0.903	30.6
0.26	0.325	0.899	31.1
0.28	0.322	0.896	31.6
0.30	0.320	0.894	31.9
0.319	0.319	0.894	32.0

 $p = 0.006$ 

$d$	$x$	$y$	$a$
0.05	0.651	0.975	8.0
0.08	0.548	0.961	12.3
0.10	0.500	0.952	15.0
0.12	0.463	0.943	17.4
0.14	0.434	0.934	19.6
0.16	0.411	0.926	21.5
0.18	0.394	0.919	23.0
0.20	0.379	0.912	24.6
0.22	0.369	0.906	25.6
0.24	0.360	0.900	26.6
0.26	0.354	0.895	27.4
0.28	0.349	0.891	28.0
0.30	0.346	0.888	28.4
0.34	0.344	0.885	28.6
0.343	0.343	0.886	28.6

 $p = 0.007$ 

$d$	$x$	$y$	$a$
0.05	0.686	0.975	6.9
0.08	0.585	0.961	10.6
0.10	0.537	0.952	12.9
0.12	0.499	0.943	15.0
0.14	0.468	0.934	17.1
0.16	0.444	0.926	18.8
0.18	0.425	0.918	20.3
0.20	0.409	0.911	21.6
0.22	0.397	0.904	22.8
0.24	0.388	0.898	23.6
0.26	0.380	0.892	24.4
0.28	0.375	0.888	25.0
0.30	0.370	0.884	25.5
0.34	0.366	0.879	26.0
0.365	0.365	0.878	26.1

 $p = 0.008$ 

$d$	$y$	$x$	$a$
0.08	0.616	0.961	9.3
0.10	0.568	0.952	11.4
0.12	0.530	0.943	13.3
0.14	0.500	0.934	15.0
0.16	0.475	0.925	16.6
0.18	0.454	0.917	18.0
0.20	0.437	0.910	19.4
0.22	0.424	0.903	20.4
0.24	0.413	0.896	21.2
0.26	0.404	0.891	22.1
0.28	0.398	0.885	22.7
0.30	0.393	0.881	23.1
0.35	0.386	0.873	23.8
0.385	0.385	0.872	24.0

$p = 0.005$ 

$d$	$x$	$y$	$a$
0.08	0.642	0.961	8.4
0.10	0.595	0.952	10.4
0.12	0.557	0.943	11.9
0.14	0.526	0.934	14.2
0.16	0.502	0.925	14.9
0.18	0.480	0.917	16.2
0.20	0.463	0.909	17.4
0.22	0.448	0.902	18.5
0.24	0.436	0.895	19.4
0.26	0.427	0.889	20.1
0.28	0.420	0.883	20.7
0.30	0.413	0.878	21.3
0.35	0.404	0.869	22.1
0.40	0.402	0.866	22.3
0.462	0.402	0.866	22.8

 $p = 0.010$ 

$d$	$x$	$y$	$a$
0.08	0.666	0.960	7.5
0.10	0.620	0.951	9.2
0.12	0.583	0.942	10.7
0.14	0.551	0.933	12.2
0.16	0.525	0.925	13.6
0.18	0.504	0.917	14.8
0.20	0.486	0.909	15.9
0.22	0.471	0.901	16.8
0.24	0.458	0.894	17.7
0.26	0.448	0.888	18.5
0.28	0.440	0.882	19.1
0.30	0.433	0.876	19.6
0.35	0.422	0.868	20.5
0.40	0.418	0.861	20.9
0.418	0.418	0.861	20.9

 $p = 0.012$ 

$d$	$x$	$y$	$a$
0.10	0.661	0.954	7.7
0.12	0.625	0.942	9.0
0.14	0.593	0.933	10.3
0.16	0.567	0.924	11.5
0.18	0.544	0.916	12.6
0.20	0.526	0.908	13.2
0.22	0.512	0.900	14.3
0.24	0.497	0.893	15.2
0.26	0.485	0.886	15.9
0.28	0.476	0.879	16.5
0.30	0.469	0.874	16.9
0.35	0.455	0.861	17.9
0.40	0.448	0.854	18.5
0.446	0.446	0.851	18.6

 $p = 0.014$ 

$d$	$x$	$y$	$a$
0.12	0.657	0.942	7.8
0.14	0.627	0.933	8.9
0.16	0.602	0.924	10.0
0.18	0.580	0.915	10.8
0.20	0.561	0.907	11.7
0.22	0.545	0.899	12.5
0.24	0.531	0.892	13.3
0.26	0.518	0.884	13.9
0.28	0.508	0.878	15.1
0.30	0.500	0.871	15.0
0.35	0.484	0.858	16.0
0.40	0.476	0.848	16.5
0.45	0.471	0.843	16.8
0.471	0.471	0.843	16.8

$p = 0.016$ 

$d$	$x$	$y$	$a$
0.14	0.657	0.933	7.8
0.16	0.633	0.924	8.7
0.18	0.610	0.915	9.6
0.20	0.591	0.907	10.4
0.22	0.574	0.899	11.1
0.24	0.560	0.891	11.8
0.26	0.547	0.883	12.4
0.28	0.536	0.876	13.0
0.30	0.528	0.870	13.9
0.35	0.511	0.855	14.4
0.40	0.500	0.844	15.0
0.45	0.495	0.838	15.3
0.493	0.493	0.836	15.4

 $p = 0.018$ 

$d$	$x$	$y$	$a$
0.14	0.682	0.933	7.0
0.16	0.658	0.924	7.8
0.18	0.636	0.915	8.6
0.20	0.617	0.906	9.5
0.22	0.601	0.898	9.9
0.24	0.586	0.890	10.6
0.26	0.573	0.883	11.2
0.28	0.562	0.875	11.7
0.30	0.553	0.869	12.1
0.35	0.534	0.853	13.1
0.40	0.522	0.844	13.8
0.45	0.515	0.833	14.1
0.50	0.513	0.829	14.2
0.513	0.513	0.829	14.2

 $p = 0.020$ 

$d$	$x$	$y$	$a$
0.15	0.680	0.924	7.1
0.18	0.659	0.915	7.8
0.20	0.640	0.906	8.4
0.22	0.623	0.898	9.1
0.24	0.609	0.890	9.6
0.26	0.596	0.882	10.2
0.28	0.585	0.875	10.6
0.30	0.575	0.868	11.1
0.35	0.556	0.852	12.0
0.40	0.543	0.839	12.6
0.45	0.535	0.829	13.0
0.50	0.531	0.824	13.2
0.531	0.531	0.823	13.2

 $p = 0.025$ 

$d$	$x$	$y$	$a$
0.22	0.672	0.897	7.3
0.24	0.656	0.889	7.9
0.26	0.644	0.881	8.3
0.28	0.632	0.873	8.7
0.30	0.622	0.866	9.1
0.35	0.602	0.849	9.9
0.40	0.587	0.834	10.5
0.45	0.578	0.823	10.9
0.50	0.571	0.815	11.2
0.55	0.569	0.811	11.4
0.569	0.569	0.810	11.4

$$r = 0.030$$

$d$	$x$	$y$	$z$
0.26	0.682	0.880	7.0
0.28	0.669	0.872	7.4
0.30	0.660	0.865	7.7
0.35	0.639	0.847	8.5
0.40	0.623	0.831	9.1
0.45	0.612	0.819	9.5
0.50	0.605	0.809	9.8
0.55	0.601	0.802	10.0
0.60	0.600	0.800	10.0

Bușteni 15/7 1907

Ing. C. NICULESCU