Table S1. Results of correlation analysis between the size of grain and its strength properties

		a_1	a_2	a_3	W_{Fmin}	m	V_s	V_ρ	A_0	F_{max}	σ_{min}	W_{Fmax}	F_{min}	C_k	σ_{max}
a_1	rhoSpearman	1.000	0.053	0.446	0.134	0.557	0.729	0.557	0.727	0.122	-0.163	0.020	0.190	-0.000	-0.088
	Significance		0.603	0.000	0.183	0.000	0.000	0.000	0.000	0.226	0.105	0.841	0.059	0.998	0.381
a_2	rhoSpearman	0.053	1.000	0.067	0.018	0.274	0.526	0.274	0.653	-0.056	-0.292	-0.094	-0.088	-0.143	-0.352
	Significance	0.603		0.509	0.858	0.006	0.000	0.006	0.000	0.582	0.003	0.357	0.385	0.154	0.000
a_3	rhoSpearman	0.446	0.067	1.000	0.196	0.548	0.711	0.548	0.387	-0.034	-0.198	-0.222	0.271	0.101	0.125
	Significance	0.000	0.509		0.051	0.000	0.000	0.000	0.000	0.735	0.049	0.027	0.006	0.318	0.216
m	rhoSpearman	0.557	0.274	0.548	0.071	1.000	0.697	1.000	0.570	0.176	-0.052	-0.033	0.172	0.111	-0.018
	Significance	0.000	0.006	0.000	0.482		0.000	0.000	0.000	0.080	0.604	0.742	0.088	0.272	0.858
A_0	rhoSpearman	0.727	0.653	0.387	0.139	0.570	0.900	0.570	1.000	0.091	-0.276	-0.046	0.127	-0.049	-0.231
	Significance	0.000	0.000	0.000	0.168	0.000	0.000	0.000		0.367	0.005	0.648	0.208	0.630	0.021

	Low correlations
	Moderate correlations
	High correlations
	Practically full relationship

a_1 – length of the grain, mm, a_2 – width of the grain, mm, a_3 – height of the grain, mm, V_s – grain volume calculated based on three dimensions a_1, a_2, a_3, mm^3, V_ρ – grain volume calculated based on the volumetric mass density, mm^3, m – grain weight, g, A_0 – the initial cross-section of the sample, m^2, F_{min} – minimal crushing force, $kg \cdot m \cdot s^{-2}$, F_{max} – maximal crushing force, $kg \cdot m \cdot s^{-2}$, σ_{kmin} – minimal compressive stress, MPa, σ_{kmax} – maximal compressive stress, MPa, C_k – stiffness, $N \cdot mm^{-1}$, W_{Fmin} – work for the first rupture, mJ, W_{Fmax} – rupture work, mJ,