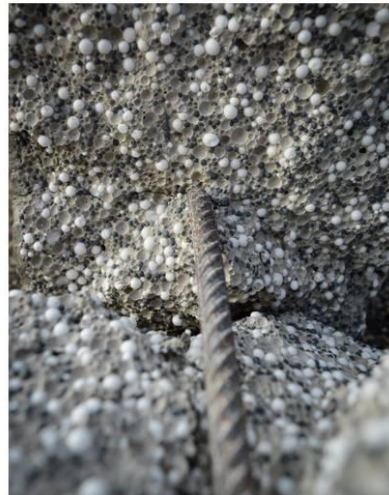


## Reinforcability of ICL-K1-PS-LWC lightweight concretes

Below is the flexural strength test (150\*150\*600) of our lightweight concrete specimens



(150\*150\*600) type ICL-K1-PS-LWC with 800 kg CEMII A-S 42.5 N cement and 450 L mixed size expanded PS-beads reinforced with  $\phi 8$  ribbed reinforcing steel. The “cooperation” between the hardware and the cement frame, typical of lightweight concrete and concrete elements made with ICL admixture in the form of solid granules, is shown in the pictures taken after.

The use of the ICL admixture has a dual role in the ironability of the lightweight concrete structures (monoliths, concrete and press elements, etc.) to be manufactured. When the ICL additive is used, the active ingredients of the additive form a surface coating on the surface of the steel insert, which on the one hand promotes the chemical reaction between the silica groups bonded to the iron surface and the polymer-silica agents. organosilica groups prevent corrosion of the steel insert, which greatly prevents the “bleeding” of the finished structures. The essence of the application of reinforcement is that the forces acting on the concrete structure are partly “absorbed” by the applied steel insert, so the stability and “resistance” of the structure to the force increases. It can be clearly seen from the pictures (which can be downloaded in full size from the “Gallery”) that it took a 5-15 ° bend of the steel insert in order for the concrete structure to crack perpendicular to the force - along a certain plane. Another noteworthy phenomenon is that the cement structure does not separate from the applied hardware, so the surface chemical bonds formed using the additive are extremely strong.