

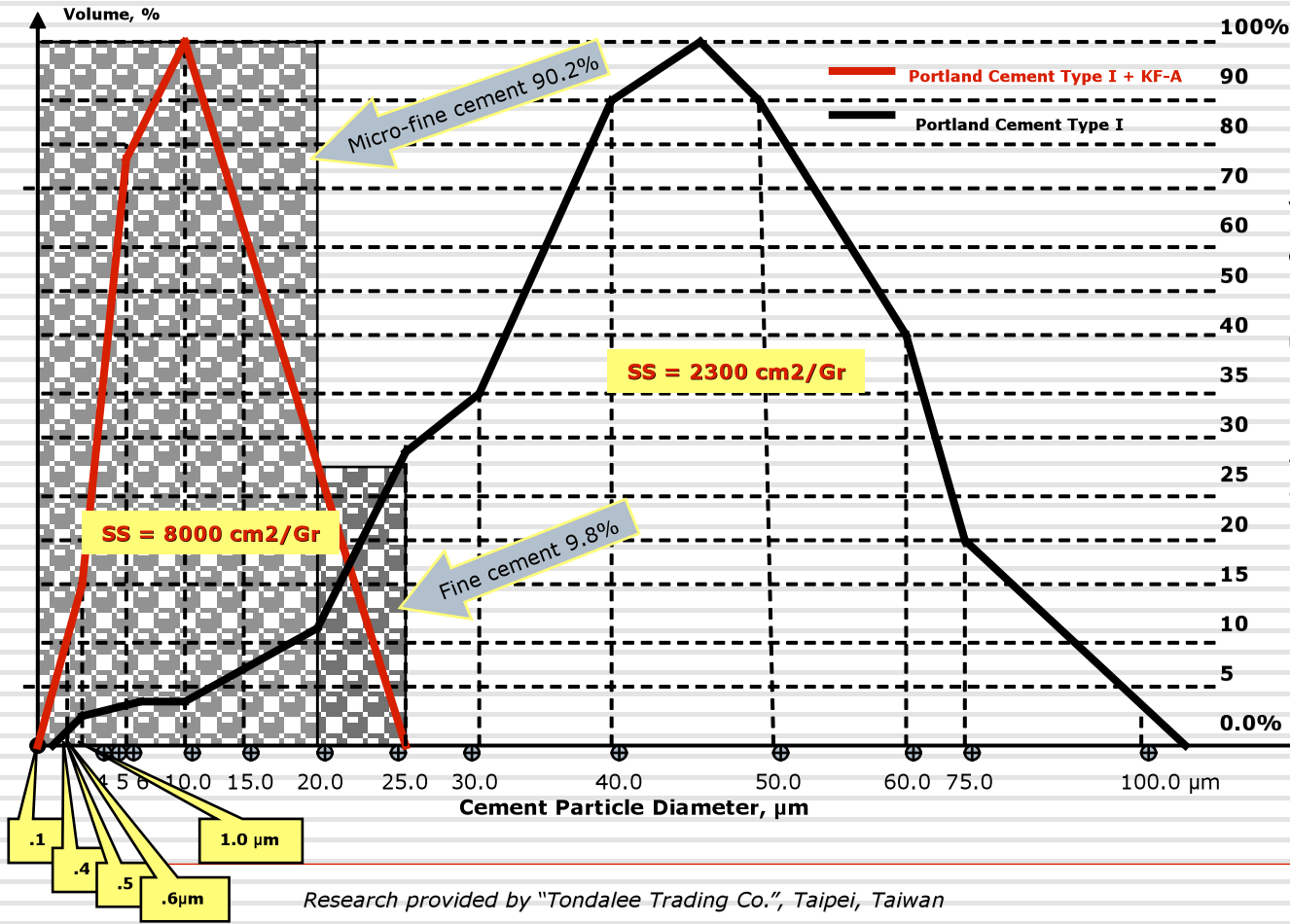
Micro-cement Replacement by Cement particles size reduction

The fineness of cement grinding is a vital property of the cement's value, determining the field of application, durability and price.

Fine cements with particle diameters of 5 μm to 20 μm are the best for injections into the micro cracks of damaged structures, enforcement and restoration of the soil formed structures, architectural and sculptural elements.

The property of KF-A admixture to decay-hydrate cement grain results in the cement particle size reduction that allows it to replace Micro-Cements. Premix of KF-A into regular Portland Cement Type I; II obtains maximal volume of cement particles with diameter up to 25 μm, where dominating median size is at 5 μm to 15 μm. The same cement without KF-A has dominating median size at 40 μm to 60 μm.

CEMENT PARTICLES SIZE DISTRIBUTION



The Wagner's method was chosen for Specific Surface (SS) evaluation with turbidimeter by ASTM C 115-79a.

For the specimen of Portland Cement Type I; II, the SS is 2,300 cm²/gr.

With KF-A admixture, the same cement specimen achieves at 6,000 cm²/gr to 8,000 cm²/gr.

The variety of the SS development with KF-A admixture depends on the speed and time of blender rotation within 5 to 10 minutes only. No more expensive kiln and hard grinding required to get micro-cement.

Obviously, the median size of the cement particles and Specific Surface are inversely related features.

It is effectively performed by KALMATRON® KF-A decay-hydration reactions with 10 times cement size reduction.

Research provided by "Tondalee Trading Co.", Taipei, Taiwan