

Media Release

Introducing Cerasmooth™ compound – the wear life solution for the FGD market

Weir Minerals has announced an upgrade to its polymer-ceramic composite for the Flue Gas Desulphurisation (FGD) market. Specially engineered for use in FGD applications, the new and improved Cerasmooth™ compound is designed to provide ultimate wear and corrosion resistance.

“We are focused on the continuous improvement of our materials, which is why we have enhanced our existing formulation to improve component wear life and meet the ever more demanding market’s needs,” states Patrick Moyer, Executive Vice President of Engineering for Weir Minerals.

Cerasmooth™ material was developed for the Warman® GSL pump series but can also be used for any acidic, light slurry application.

FGD Application

The FGD application is very unique. It can experience wide variations in pH during operation and also contains erosive components in the slurry. This makes it difficult to select an optimum metal solution to cover the range of possible conditions. Materials used in this application need to be capable of handling these demanding and varying operating conditions.

“At Weir Minerals, we provide value by delivering materials and solutions aligned to the industry’s needs, which is why we developed Cerasmooth material. The polymer matrix of Cerasmooth is almost impervious to the extremely acidic environments that can occur in FGD duties, and the ceramic filler provides outstanding wear resistance to the typical erosive particles in the slurry,” says Edward Humphries, Director of Research & Development for Weir Minerals.

Benefits to the customer

Cerasmooth™ compound has an equal combination of erosion and corrosion resistance, which work together to deliver optimum life in an FGD circuit, offering customers longer wear life than ever before.

“Significant in-house wear testing has shown that up to 60% improvement over the previous polymer ceramic material offering can be obtained. This has been achieved by successfully improving the bond that holds the wear resistant silicon carbide grains in place during the wear process,” states Edward Humphries.

In addition, the uniquely formulated composite material boasts increased mechanical strength and improved strain characteristics. “Achieving flexible strength as high as double that seen in first generation materials,” says Edward Humphries.

By utilising Cerasmooth™ material, operators can significantly improve the service life of their pump compared to metal and rubber liners. Compared to a rubber lined pump, Cerasmooth™ compound has an increased ability to withstand the cutting damage that can be caused by pipe scale coming loose from the FGD circuit and passing through the pump.

The creation of Cerasmooth™ material

Cerasmooth™ material was developed through a rigorous process of testing various polymer binders and ceramic fillers to find the optimum combination to deliver the performance required.

Weir Minerals recognises the importance of material development for its customers and continuously produce state-of-the-art materials to improve component wear life.

Cerasmooth™ material is now available across the globe. Visit www.cerasmooth.weir for more information.