Production and Economical Aspects of MMCs
(Intermediate Project 01.01.12 to 31.06.12)

Topics: Erosion, pump materials, MMC, biomimetics, corrosion,…

Pumping materials: The erosion resistance of a material is a crucial requisite for an economical use of pump materials, especially under industrial (muddwater) conditions. The economical potential is tremendous.

Procedure: First step, different numerical models have been evaluated to predict the erosion behavior. Thereby, we could identify suitable MMCs for pumps and, additionally, reveal their specific economical production paths.

Outlook: Refined Finite-Element Model (FEM) damage model: in contradiction to the pre-project, we intend to distinguish between erosion of the matrix and reinforcement-phase.

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