AKW Equipment + Process Design Expertise in Alumina Refineries

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Abstract

As the Bauxite and Alumina industry currently face important market challenges, a key objective is to improve and optimize the overall process chain, from bauxite mining and processing through to the refinery and smelter process. Since 1978, AKW Equipment + Process Design delivered more than 50 projects in alumina refineries. There, AKW A+V hydrocyclones AKA-VORTEX and distributors AKA-SPIDER have been operating successfully for several decades. For the special conditions of hot caustic soda, AKW Equipment + Process Design proprietary polyurethane hydrocyclones are also used with great success, contributing to significant cost savings without compromising process performance. Beside this traditional approach, AKW Equipment + Process Design recently introduced its unique twin hydrocyclone concept for alumina classification. Also made of our proprietary polyurethane, this newly introduced system is capable of delivering further cost savings, especially through smaller footprint and easier maintenance. An explanation of the installation and operation of such alumina clusters in a refinery will be shown as an example.

Keywords: Alumina refinery; alumina classification; twin hydrocyclones; annular distributor.