Journal of Energy Resources Technology

Guest Editorial

Special Issue on Advances in Fluidized Bed Combustion

The 11 papers presented in this Special Issue, and five others to be published in regular issues, are based on papers presented at the 17th International (ASME) Fluidized Bed Conference held May 18–21, 2003, in Jacksonville, FL. About 115 peer-reviewed papers were presented at the conference. Out of those, several of them were reviewed again for this Journal and 16 papers were recommended by the review committee. The interest generated by the conference reflects the continuing importance of novel and environmentally friendly energy technologies in our industrialized society. Several researchers, operators, and designers have shared and disseminated the experience and new knowledge that they have gained in recent years. Although fluidized bed combustion technology has evolved into a more mature technology over the past 25 years, there are quite a few challenges to be met in terms of design, scale-up, performance improvement, operation, and regulatory issues.

A striking characteristic of the conference and these selected papers was the breadth of the topics presented, ranging from sophisticated new analytical approaches for trace elements and organic compounds, to the intricate chemistry of fossil fuel combustion and emission control, and to the forms and effects of fossil fuels in the natural environment. This diversity of material is a result of the many advances in our understanding of the effect of human activities on the environment. There is a significant interest in the area of "sustainable fuels" covering industrial, municipal solid wastes, and biomass fuels.

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