

HEAT EXCHANGER FOULING AND CLEANING – 2013 09–14 June 2013, Budapest, Hungary

PREFACE

As the requirement for highly effective heat transfer continues to increase steadily due to the rising cost of energy, manufacturers and operators of heat exchangers come under pressure to develop innovative designs and operational modes which will optimize heat recovery while at the same time reduce equipment size and mass. At the same time, they have to deal with fluids which are increasingly difficult to process. One major problem directly related to these trends is the deposition of unwanted materials on the heat transfer surfaces, which occurs in most heat exchangers operating with industrial fluids. This problem is particularly gaining attention for heat exchangers with complex geometries which are now used more commonly in industry. Conservative studies estimated that heat exchanger fouling may lead to additional costs in the order of 0.25% of the GDP of industrialised countries, and that it is responsible for 2.5% of the total equivalent anthropogenic emissions of carbon dioxide. Not surprisingly, this comes with an enormous energy price-tag as well as considerable green-house gas emissions, acidification of water resources and release of chemical fouling inhibitors or cleaning agents.

A bi-yearly series of conferences on heat exchanger fouling and cleaning has been organized since 1995, mostly by the editors of the present e-proceedings. These meetings provide an opportunity for experts from industry, academia and government research centres from around the world to present their latest research findings and technological developments in the areas of fouling mitigation and cleaning technologies. The meetings consist of overview presentations, technical papers, poster sessions, and panel discussions. Following the highly successful meetings in San Luis Obispo, USA (1995), Lucca, Italy (1997), Banff, Canada (1999), Davos, Switzerland (2001), Santa Fé, USA (2003), Kloster Irsee, Germany (2005), Tomar, Portugal (2007), Schladming, Austria (2009), Crete Island, Greece (2011), the 10th conference in this series was held in Budapest, Hungary in June 2013.

The following papers have been presented and recommended for publication in the conference e-proceedings after a careful refereeing and revision process. The proceedings cover many aspects of heat exchanger fouling along with innovative state-of-the-art fouling mitigation and cleaning strategies. The editors wish to thank everybody who contributed towards the conference and the post conference e-proceedings, i.e.

- all the authors and participants who invested substantial efforts to produce high-quality papers and to attend the conference;
- the technical referees who helped to improve the quality of these papers even more, by providing valuable and helpful comments; and
- the Conference Advisory Committee and the Session Chairpersons.

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