

Distillation and Absorption '97

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Distillation and Absorption '97

A three-day symposium organised by the Institution of Chemical Engineers and The Netherlands Process Technology Foundation, and held at Maastricht, The Netherlands, 8–10 September 1997.

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SYMPOSIUM SERIES No. 142
ISBN 0 85295 393 3

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Printed by The Chameleon Press Limited, 5-25 Burr Road, London SW18 4SG, UK

Preface

Distillation is a hugely important unit operation. The oil industry alone, with over 900 refineries throughout the world, has a primary distillation capacity of 3.8 billion tonnes/year. The production of petrochemicals and other organics is heavily reliant on distillation, but it is used too in processing lower tonnage high-value products like specialities and fine chemicals. The natural gas industry (1.4 billion tonnes/year) is another large market for distillation technology, with the separation of NGL into ethane, C_3/C_4 and natural gasoline. Cryogenic distillation of air is the principal process for the production of industrial quantities of oxygen, nitrogen and argon, and is a significant consumer of electric power.

Gas absorption and its twin operation, gas stripping, are similar to distillation both in design principles and in the equipment used. These processes treat much of the world's natural gas, to remove water and other contaminants. They are widely applied to purify industrial waste streams, often for environmental protection.

These books present the collected papers of the 6th International Symposium on Distillation and Absorption held at Maastricht in September 1997. The papers, covering a broad range of topics from the estimation of physical properties to the design and performance of contacting trays and packing, demonstrate a remarkably high rate of advance in the technology. Our understanding of the behaviour of distillation and absorption systems is improving rapidly, resulting in new methods of control, better process integration, novel schemes for reactive and extractive distillation and for batch processes, more effective equipment, and in the many other developments described here.

We would like to thank all those who have worked so hard to make this collection of papers possible, not least of course the authors themselves. The worldwide team of referees played a key role in clarifying and enhancing the technical material, and their labours are highly appreciated. We would also like to acknowledge the essential contributions of the IChemE team at Rugby, and the Editor's excellent assistant at Oxford, Jennet Batten. These books are our distilled product — we hope you enjoy them and find them useful.

Anthony Barber, IChemE, UK
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