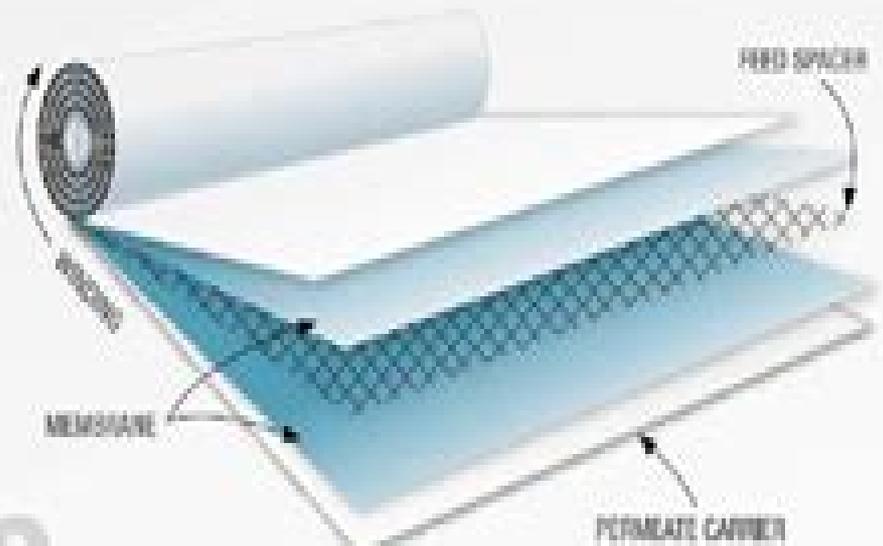
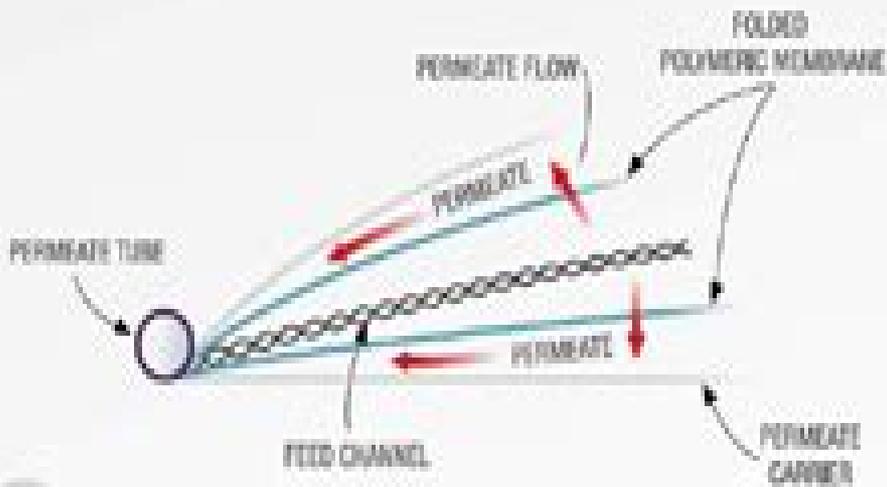


1 Membrane leaf being glued onto the permeate carrier



2 Winding of a spiral element



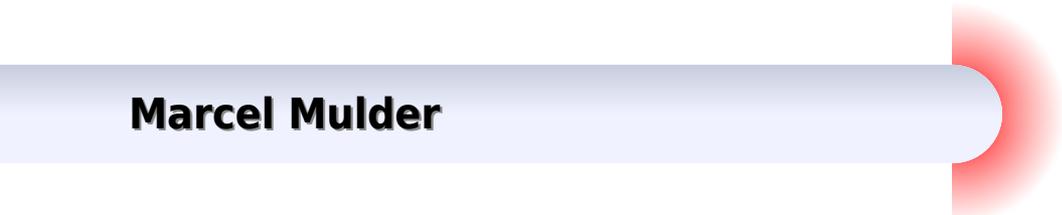
3 Cross section of a membrane leaf



4 Finished spiral element

Basic Principles Of Membrane Technology

Marcel Mulder



Basic Principles Of Membrane Technology:

Basic Principles of Membrane Technology Marcel Mulder, 1996-09-30 The field of synthetic membrane science and technology is an active growing field involving an interdisciplinary mixture of polymer chemistry physical chemistry and chemical engineering Some membrane processes are reasonably well understood and have been commercialised for some period of time Other membrane processes have only recently been employed in commercial applications and still other processes are only in formative research stages This volume gives a comprehensive compendium of the basic principles in the field of synthetic membranes The following topics are covered basic aspects of membrane processes materials and material properties membrane preparation and characterisation membrane transport concentration polarisation and fouling process and module design The second edition of this well established text has been considerably expanded and updated and many chapters now contain sections giving solved and unsolved problems Audience This book is recommended as a textbook for undergraduate and graduate students as well as a comprehensive reference for engineers scientists and technical management

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Basic Principles of Membrane Technology J. Mulder, 2013-04-18 Membranes play a central role in our daily life or as indicated by one of my foreign colleagues Richard Bowen If you are tired of membranes you are tired of life Biological membranes are hardly used in industrial applications but separations with synthetic membranes have become increasingly important Today membrane processes are used in a wide range of applications and their numbers will certainly increase Therefore there is a need for well educated and qualified engineers chemists scientists and technicians who have been taught the basic principles of membrane technology However despite the growing importance of membrane processes there are only a few universities that include membrane technology in their regular curricula One of the reasons for this may be the lack of a comprehensive textbook For me this was one of the driving forces for writing a textbook on the

basic principles of membrane technology which provides a broad view on the various aspects of membrane technology I realise that membrane technology covers a broad field but nevertheless I have tried to describe the basic principles of the various disciplines Although the book was written with the student in mind it can also serve as a first introduction for engineers chemists and technicians in all kind of industries who wish to learn the basics of membrane technology

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