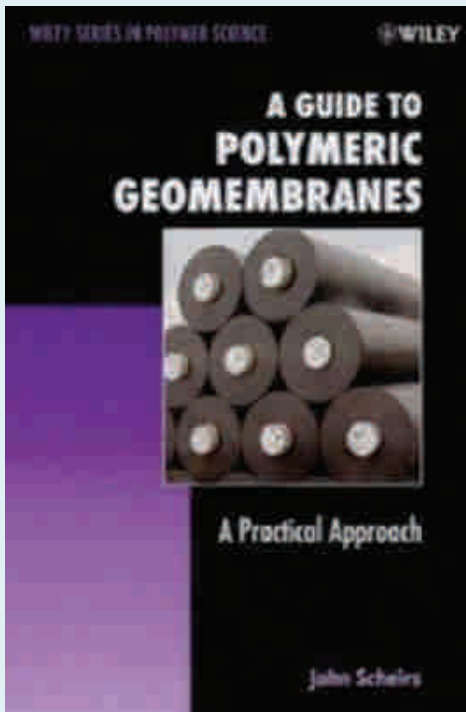


Book Review

A Guide to Polymeric Geomembranes - A Practical Approach ISBN-10: 0-470-51920-7

by John SCHEIRS



This is an interesting book for readers who want to learn about polymeric geomembranes from a practical angle. This 572-page book is divided into 19 chapters with information ranging from manufacturing, physical and chemical properties, testing methods and applications. Chapter 2 covers the manufacturing methods.

Following this, in Chapters 3 to 11, the author provides detailed information on HDPE, LDPE, fPP, CSPE, PVC, EIA, EPDM, bituminous and specialty liner membranes. Each type has one chapter dedicated to it. The information includes the advantages and disadvantages of each type. Furthermore, there is a useful discussion on the various brands that are available.

Chapter 12 deals with information on performance properties, stress cracking, puncture resistance, ply adhesion, tear, permeability and UV resistance.

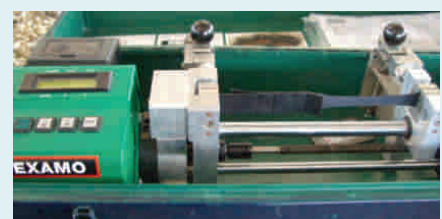
Chapters 13 to 16 are on testing, chemical resistance, failure modes, and applications.

Chapter 17 is on welding of geomembranes. There are photos of welding equipment including a wedge welder that is used in this region. The useful data include welding parameters such as temperature and speed for different thicknesses. There is a discussion of welding defects and this is illustrated by photographs. There are also pictures showing heat distortion, burn through, delamination of an extrusion fillet weld and a "good textbook double wedge weld".

Geomembrane Weld Testing Methods are discussed in Chapter 18. This covered parameters and standards for peel and shear test equipment. The failure mode for each material type is also discussed. A non-destructive leak location method is described. This is based on the same principle as that for doing an electrical leak location survey. The information in Chapter 13 is a useful pre-requisite for Chapter 18.

Chapter 19 discusses the factors to be considered for geomembrane installation — design considerations, preparation, penetration, geotextile cushioning, protection, thermal expansion and wrinkles.

This is definitely a book for practitioners.



Shear Test Equipment

Reviewed by: Sam TSEN