특별강연 I

Title: THE REVERSE OSMOSIS PROCESS

This paper will begin by describing osmosis and how reverse osmosis works. It will show how osmotic pressure affects reverse osmosis operations. It will explain salt rejection, membrane flux, and recovery rates and the affect that salt built up has on membrane performance. It will explain the limitations of RO performance and why pretreatment is important. It will describe the two basic types of membrane, asymmetric and thin-film composite and explain the difference between these types plus compare cellulose acetate types to aromatic polyamide type membranes. It will discuss operating efficiences as it compares to feedwater pressure, concentration, temperature and pH. Finally, it will discuss the differences between tubular, plate and frame, hollow fiber and spiral wound element design. It will be a paper that talks about the basics of RO systems and should give a person who is unfamiliar with RO a basic introduction to this type of separation technology.

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From : Steve Erickson

(Film Tec., Dow Chemical Ltd.)

ASM : 1162 (TRC : 1912

* North star