

Abstract

Process Economics Program Report No. 173A

SPECIALTY POLYOLEFINS: VLDPE

(July 1993)

This report presents preliminary process designs and economics for the production of very-low-density polyethylene (VLDPE) resins for processes of current industry importance: high-pressure tubular and autoclave processes using Exxon's new Exxpol[®] technology, high-pressure autoclave process using CdF Chimie's technology (now owned by EniChem), and DSM's low-pressure adiabatic solution process.

In addition, the report includes a section on the present status of the VLDPE industry. Reviews of pertinent patents on linear polyethylene processes are also provided.

This report provides SRI's first process review and economic evaluation of the commercial production of polyolefins utilizing the new generation of olefin polymerization technology which uses a single-site metallocene catalyst. Besides present and future VLDPE producers, this report can assist all polyolefins manufacturers in their evaluation of the economics for the various commercial polyolefins technologies.

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