

PROCESS ECONOMICS PROGRAM

SRI INTERNATIONAL
Menlo Park, California
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Abstract

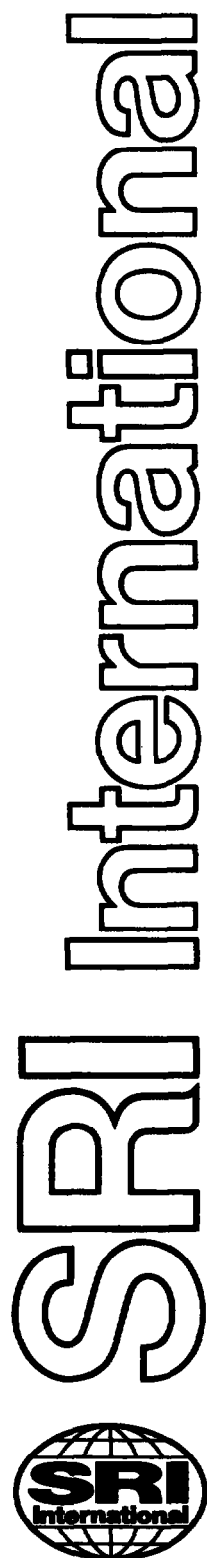
Process Economics Program Report No. 56A

UREA

(January 1981)

The market for urea is growing rapidly worldwide principally because it is being used increasingly to replace ammonium nitrate as the primary source of solid nitrogen in fertilizers. Processes for manufacturing urea continue to change because of restraints imposed by higher energy costs, environmental regulations, and other economic factors.

This report presents updated process designs and economic evaluations for plants to produce 1,500 short tons/day of prilled urea. Economics for the three most popular processes are given, including those for half-sized and double-sized plants. Pollution abatement procedures are treated in particular detail. Manufacturing techniques and new developments are reviewed and patent summaries are presented on these and related processes as well as on processes for manufacturing granular urea.



Report No. 56A

UREA

SUPPLEMENT A

by JOHN L. CHADWICK

January 1981

A private report by the
PROCESS ECONOMICS PROGRAM

Menlo Park, California 94025

For detailed marketing data and information, the reader is referred to one of the SRI programs specializing in marketing research. The CHEMICAL ECONOMICS HANDBOOK Program covers most major chemicals and chemical products produced in the United States and the WORLD PETROCHEMICALS Program covers major hydrocarbons and their derivatives on a worldwide basis. In addition, the SRI DIRECTORY OF CHEMICAL PRODUCERS services provide detailed lists of chemical producers by company, product, and plant for the United States and Western Europe.

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