

CONTENTS

Paper	Page
RADIOISOTOPES AND TURBINE FLOW MEASUREMENTS by Jack C. Schuster and Robert L. Hansen	1
DRY-TYPE COOLING TOWERS by Edward A. Cecil, Paul R. Cunningham, Clarence J. Steiert, and Rodger O. Young	11
ENVIRONMENTAL ASPECTS OF SITE SELECTION by Eugene F. Dudley	21
VELOCITY AND TEMPERATURE IN BUOYANT SURFACE JET by Richard Dornhelm, Manuel Nouel, and R. L. Wiegel	29
NONLINEAR DYNAMIC ANALYSIS OF COOLING WATER by Chang-hua Yeh	49
PREDICTING QUALITY EFFECTS OF PUMPED STORAGE by Carl W. Chen and Gerald T. Orlob	65
FLY ASH AS STRUCTURAL FILL by Anthony M. DiGioia, Jr. and William L. Nuzzo	77
NEW APPROACH TO POWER PLANT SITING by James D. Calvert, Jr. and William L. Heilman	93
TRANSTHETICS by Harold P. Hulett	103
COMPUTER MODEL FOR THERMAL PLUME by Robert E. Barry and David P. Hoffman	117

(over)

This Journal is published aperiodically by the American Society of Civil Engineers. Publications office is at 345 East 47th Street, New York, N.Y. 10017. Address all ASCE correspondence to the Editorial and General Offices at 345 East 47th Street, New York, N.Y. 10017. Allow six weeks for change of address to become effective. Subscription price is \$6.00 per year with discounts to members and libraries. CO, UP, PO, PP, SU. The Society is not responsible for any statement made or opinion expressed in its publications.

	Page
ANALYSIS AND DESIGN OF HYPERBOLIC COOLING TOWERS by German Gurfinkel and Adolf Walser	133

DISCUSSION
Proc. Paper 8927

INTEGRATION OF PUMPED-STORAGE WITH TIDAL POWER, ^a by Thomas L. Shaw and Geoffrey R. Thorpe (Jan., 1971). by M. Hanif Chaudhry	155
EARTHQUAKE RESEARCH NEEDS FOR NUCLEAR POWER PLANTS, by George W. Housner (Jan., 1971. Prior Discussion: July, 1971). closure	167
HYDROELECTRIC POWER PLANT TRASHRACK DESIGN, by Lloyd E. Sell (Jan., 1971. Prior Discussion: Dec., 1971). closure	168
EDWARD HYATT (OROVILLE) UNDERGROUND POWER PLANT, by Alfred R. Golzé (Mar., 1971. Prior Discussion: Dec., 1971). closure	169
DETERMINATION OF IN SITU STRESSES IN CONCRETE DAMS, by Merlin D. Copen and George B. Wallace (Mar., 1971). errata	169
CHURCHILL FALLS POWER FACILITIES, by D. Wermenlinger, J. G. S. Thomson, and J. M. Gardiner (Mar., 1971). errata	170
SOILS ENGINEERING FOR WELLS PROJECT, by Harris H. Burke (Mar., 1971). errata	170
STRUCTURAL DESIGN OF WELLS HYDROCOMBINE, by C. C. Wang (Mar., 1971). errata	171
EARTHQUAKE FORCES ON EQUIPMENT IN NUCLEAR POWER PLANTS, ^a by Asadour H. Hadjian (July, 1971). by Melvin W. Jackson	171
by Roland L. Sharpe and Garrison Kost	172
COOLING POND TEMPERATURE VERSUS SIZE AND WATER LOSS, ^a by Bruce A. Tichenor and Alden G. Christianson (July, 1971). by George F. Bailey and John C. Sonnichsen, Jr.	175

^a Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.

	Page
SIZING OF PUMPED STORAGE CONDUITS, by Raymond K. Sullivan, Jr. (July, 1971).	
errata	178
POWER OPTIMIZATION FOR PRESCRIBED THERMAL POLLUTION, by Amir N. Nahavandi and Michael Pappas (July, 1971).	
errata	178
GRAPHICAL AND COMPUTER ANALYSIS OF TAILRACE SURGES, ^a by C. Samuel Martin (July, 1971).	
by Wayne A. Johnson and M. Hanif Chaudhry	179

^a Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.