TABLE OF CONTENTS

LECTURES ......................................................... 1

APPLICATION OF DRY GAS SEALS
ON A HIGH PRESSURE HYDROGEN RECYCLE COMPRESSOR .......... 3
   Donald R. Carter

INFLUENCE OF GAS SEALS ON ROTOR STABILITY OF
A HIGH SPEED HYDROGEN RECYCLE COMPRESSOR ................... 9
   Kenneth E. Atkins and Robert X. Perez

SOLUTION OF SUBSYNCHRONOUS VIBRATION PROBLEMS IN
RADIAL FLOW HIGH-SPEED TURBINES ................................ 19
   Heiko Sandstede, Klaus Reischl, and Martin L. Leonhard

ONLINE DIAGNOSTICS ON ROTATING MACHINERY ..................... 29
   Kim A. Lovejoy

VACUUM DISTILLATION METHODS FOR LUBE OILS
INCREASE TURBOMACHINERY RELIABILITY ............................. 41
   Mark A. Adams and Heinz P. Bloch

WATER CONTAMINATION OF STEAM TURBINE LUBE OILS—HOW TO AVOID IT 51
   William L. Coleman

EXPERIENCE WITH ONLINE CONDITION MONITORING SYSTEM .......... 57
   Refah Unsal and Meherwan P. Boyce

TURBINE PROTECTION SYSTEM PERFORMANCE ........................... 67
   Margaret C. Campbell

OPERATING EXPERIENCE WITH IMPROVED STEAM TURBINE PACKING RINGS 77
   Steve Williams and Ronald Brandon

TURBINE-GENERATOR LIFE ASSESSMENT EXTENSION .................... 85
   Donald R. McCann, H. R. Jhansale, and James L. Anderson

SAFE DIAGRAM—A DESIGN AND RELIABILITY TOOL FOR TURBINE BLADING 93
   Marari P. Singh, John J. Vargo, Donald M. Schiffer, and James D. Dello

IMPROVING PLANT ECONOMY THROUGH
RETROFIT AND MAINTENANCE OF COMPRESSORS ....................... 103
   Karl H. Nissler

SPECIAL PAPER .................................................... 113

EMERGENCY TURBINE REPAIR PROCEDURES ............................ 115
   Peter P. Franks, Jr., and Ben Eads

TUTORIAL SESSIONS .............................................. 119

LARGE MOTOR SPECIFICATION AND SELECTION ....................... 121
   William H. Miller

SEALS .................................................................... 131

SEAL SYSTEMS ...................................................... 132
   Gerald Lesiecki

DRY GAS COMPRESSOR SEALS ....................................... 133
   Piyush Shah

CUSTOM ENGINEERED SEALS FOR UNUSUAL APPLICATIONS .......... 132
   Robert J. Schmal

FULL FLUID FILM FACE SEALS ..................................... 141
   Peter Lytwyn