

# Table of Contents

## LECTURES

SURVEYING TILTING PAD JOURNAL BEARING AND GAS— LABYRINTH SEAL COEFFICIENTS AND THEIR EFFECT ON ROTOR STABILITY .....	1
<i>John A Kocur, John C. Nicholas, Chester C. Lee</i>	
ROTOR BEARING LOADS WITH HONEYCOMB SEALS AND VOLUTE FORCES IN REINJECTION COMPRESSORS .....	11
<i>Leonardo Baldassare, John W. Fulton</i>	
IMPROVING THE RELIABILITY OF A HIGH SPEED REFRIGERATION COMPRESSOR .....	21
<i>Ray D. Kelm, Malcolm E. Leader</i>	
STUDY OF A ROTORDYNAMIC ANALYSIS METHOD THAT CONSIDERS TORSIONAL AND LATERAL COUPLED VIBRATIONS IN COMPRESSOR TRAINS WITH A GEARBOX .....	31
<i>Masayuki Kita, Takeski Hataya, Yasunori Tokimasa</i>	
REDESIGN OF A HIGH SPEED COMPRESSOR DRIVE STEAM TURBINE TO OVERCOME CAPACITY, EFFICIENCY, AND RELIABILITY ISSUES .....	39
<i>Richard G. Olivier, Hayden Brown</i>	
PIPELINE STAGE DESIGN FOR INCREASED OPERATING RANGE .....	45
<i>Gilles Nawrocki, Denis Guénard, Vittorio Michelassi</i>	
DEVELOPMENT OF A SYSTEM FOR LEAN, PREVAPORIZED, PREMIXED COMBUSTION .....	55
<i>Richard J. Roby, Michael S. Klassen, Leo Eskin, Michael Ramotowski, Glenn Gaines</i>	
ELECTRIC SYSTEMS FOR HIGH POWER COMPRESSOR TRAINS IN OIL AND GAS APPLICATIONS—SYSTEM DESIGN, VALIDATION APPROACH, AND PERFORMANCES .....	61
<i>Roberto Baccani, Richard Zhang, Tommaso Toma, Andrea Iuretig, Mauro Perna</i>	
ANALYSIS OF VIBRATORY STRESS OF INTEGRAL SHROUD BLADE FOR MECHANICAL DRIVE STEAM TURBINE .....	69
<i>Yasutomo Kaneko, Kazushi Mori, Toshihiro Miyawaki, Satoshi Hata</i>	
ON THE POTENTIAL OF METAL AND CERAMIC BASED ABRADABLES IN TURBINE SEAL APPLICATIONS .....	79
<i>Dieter Sporer, Scott Wilson, Iacopo Giovannetti, Arno Refke, Massimo Giannozzi</i>	
ASME PTC-10 MODIFIED TEST FOR MECHANICAL ASSESSMENT OF CENTRIFUGAL COMPRESSORS .....	87
<i>Marcelo Accorsi Miranda, Roberto Firmento de Noronha</i>	
APPLICATION OF DYNAMIC SIMULATION IN THE DESIGN, OPERATION, AND TROUBLESHOOTING OF COMPRESSOR SYSTEMS .....	97
<i>Vinod Patel, Jeffery Feng, Surajit Dasgupta, Prakash Ramdoss, Jihong Wu</i>	

## TUTORIALS

RECIPROCATING COMPRESSOR CONDITION MONITORING .....	107
<i>Steven M. Schultheis, Charles A. Lickteig, Robert Parchewsky</i>	
GAS TURBINES AND TURBOCOMPRESSORS FOR LNG SERVICE .....	115
<i>Cyrus B. Meher-Homji, Terryl Matthews, Antonio Pelagotti, Hans P. Weyermann</i>	
A PRACTICAL GUIDELINE FOR A SUCCESSFUL ROOT CAUSE FAILURE ANALYSIS .....	149
<i>David L. Ransom</i>	

ADVANCES IN GAS TURBINE COUPLINGS .....	157
<i>Joseph P. Corcoran, Douglas Lyle, Patrick McCormack, Tim Ortel</i>	
MAINTENANCE AND OPERATING PRACTICES EFFECTS ON DEGRADATION AND LIFE .....	173
<i>Ranier Kurz, Klaus Brun</i>	
REFINING FUNDAMENTALS .....	187
<i>Michael D. Morris</i>	
<b>DISCUSSION GROUPS</b> .....	<b>189</b>
<b>SHORT COURSES</b> .....	<b>209</b>
<b>ADVISORY COMMITTEE</b> .....	<b>215</b>
<b>PROFESSIONAL STAFF</b> .....	<b>223</b>
<b>TURBOMACHINERY LABORATORY</b> .....	<b>227</b>