

Since September 2004, the FSA has contributed the monthly *Sealing Sense* column to *Pumps & Systems*. These articles address technical issues in the fluid sealing industry and offer industry consensus technical education for manufacturers, distributors and end users. Turn to page 54 for this month's installment on the most energy efficient pump

packing environmental control systems.

Below is an index of the articles that have appeared in *Sealing Sense* since the start of the column. Go to [www.pump-zone.com](http://www.pump-zone.com) to access them in the archives or contact George Lake at 205-345-0477 or [glake@pump-zone.com](mailto:glake@pump-zone.com) for information regarding reprints.

ISSUE	AUTHOR	TITLE
<b>2004</b>		
September	Bill Adams	How do you determine the primary cause(s) of mechanical seal failure?
October	Bill Adams	What are the symptoms, causes and corrective actions for failure of mechanical seals by chemical attack?
November	Bill Adams	What are the principal symptoms, causes and corrective actions for failure of mechanical seals induced by mechanical breakdown?
December	Bill Adams	What are the symptoms, causes, and corrective actions for failure of mechanical seals by thermal attack?
<b>2005</b>		
January	Rick Page	What tools are available for applying the total life cycle costing to selection of mechanical seal systems?
February	Steve Stratton Jose Veiga	How do you select and install the right gasket?
March	Calvin Gillis	How can spiral wound gasket selection and installation problems be avoided?
April	Jocelyn Vachon	What are packings?
May	Lloyd Aanonsen	How important are flange design and pipe alignment for optimum installation and performance of rubber expansion joints?
June	Phil Peck	When and how do I use API Flush Plan 53?
July	Ralph Merrullo	Can I seal vertical shafts with standard mechanical seals?
August	Mike Payette	How do non-metallic (fabric) expansion joints and metallic expansion joints compare in flue duct applications?
September	Pete Petrunich	A potpourri of troubleshooting questions on mechanical seals.
October	Dave Burgess	What gasket thickness should I use in my pump system?
November	Kris Kolb	How do you choose between all the various types of gasket materials?
December	Eric Vanhie	What is the best wear face material for my mechanical seal?
<b>2006</b>		
January	Eric Vanhie	What is the best silicon carbide wear face material for my mechanical seal?
February	Jim Richter	How can an expansion joint prevent system leaks?
March	Ron Frissard	What are the best pump packing installation techniques?
April	Jose Viega	How important is chemical resistance for selection of a pump packing?
May	Julie Simonton Dave Burgess	Troubleshooting bolted flange connection leaks.
June	Kris Kolb Brian Hasha	What factors should be considered when installing a spiral wound gasket?
July	Alfred Cooper Alan McGovern	Are you overlooking packing as a sealing solution?
August	Jason Wall	When and how do I use API Flush Plan 54?
September	Ted White	Would a rubber or metal expansion joint better suit my application?
October	Lonnie LaRoche	How do I evaluate and control my fluid sealing costs?
November	Kevin Dove	How do I choose the right gasket for pumps in chemical service?
December	Lloyd Aanonsen	How can I apply expansion joints to plastic and fiberglass reinforced piping?
<b>2007</b>		
January	Phil Peck	What procedures should I use when storing my mechanical seals?
February	Tim Magill	When and where do I apply lip seal technology in my process?
March	Eric Vanhie	How long will a mechanical seal last? (Part 1)

April	Eric Vanhie	How long will a mechanical seal last? (Part 2)
May	Chris Boss	When should I use braided PTFE packing and in what form?
June	Kathy Roberson	What should look for when choosing a high-performance elastomer for a specific application?
July	Greg Raty	What are the benefits and pitfalls of graphite packing? (Part 1)
August	Greg Raty	What are the benefits and pitfalls of graphite packing? (Part 2)
September	Rob Phillips	What are the considerations in applying mechanical seals to abrasive slurry applications?
October	Tom Haan	How can I reduce consumption of seal flush water going to my packing and mechanical seals?
November	Mike Rosa	How do I troubleshoot compression packing?
December	Chris Little	What are the methods for successfully sealing slurries?
<b>2008</b>		
January	Charlie Miskell	Was it really the gasket?
February	Lloyd Aanonsen	How can I troubleshoot expansion joint failures?
March	Phil Peck	What is the most effective seal design when misalignment is present?
April	Kris Kolb	What is the impact of flange finish on gasket performance?
May	Gordon Buck Tom Lai	What determines seal leakage?
June	Mark Pollack Pasche Raty	How do I determine bolt torque for flange connections?
July	Matthew Rosa	What are the benefits and pitfalls of expanded PTFE/graphite packing?
August	Craig Witkinson	Where mechanical seals meet pumps: What is the next generation?
September	Walter Moquin	What are bolt torque considerations for valve packing that ensure reliable performance?
October	Jim Drago	Are you playing offense or defense with your leak detection and repair?
November	Rick Page	Who should recondition my seals?
December	Bill Adams	The P3-A Equipment Standards
<b>2009</b>		
January	Mike Kraus	How can I extend the performance range of standard cartridge mechanical seals?
February	Alfred Cooper	What is the impact of packing friction on equipment performance?
March	Tommy Seales	How do plant pipe strain problems affect my pumping systems?
April	Joe Boylan	How can the capabilities of primary seal materials be improved?
May	Mike Shorts	How should I store my gaskets?
June	Carlos Girao	What is new in braided packing technology?
July	Jim Drago Chris Hicks	Is there a new way to monitor fugitive emissions?
August	Chris Boss	What are the fine points of pump packing installation and adjustment?
September	Marty Rogin Jim Richter	How do expansion joints improve performance of mechanical seals?
October	Brian Hasha	What are m and y gasket design constants, and how are they used?
November	Tom Lai	What are the basics of gas lubricated seals? (Part 1)
December	Rob Phillips	What are the basics of gas lubricated seals? (Part 2)
<b>2010</b>		
January	Calvin Gillis	How can packing solve my sealing problem?
February	Jim Drago Chris Boss Rex Carriker Phil Mahoney	How do I prevent gasket blow out?
March	Lloyd Aanonsen	What are the basics of applying expansion joints?
April	Henri Azibert	What are the most energy efficient pump packing environmental control systems?