

www.ashrae.org

August 2011

ASHRAE® JOURNAL

The magazine of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

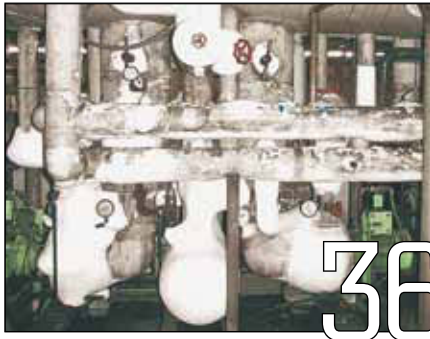


Ronald E. Jarnagin
ASHRAE President
2011-2012

Sustaining ASHRAE
Through Leadership

CONTENTS

Vol. 53, No. 8 | August 2011



36



44



48

Features

- 18** 2011 – 12 PRESIDENTIAL ADDRESS
Sustaining ASHRAE Through Leadership
By Ronald E. Jarnagin
- 26** Retrocommissioning Older Buildings
By Dave McFarlane
- 36** Liquid Refrigerant Pumping in Industrial Refrigeration Systems
By Todd B. Jekel, Ph.D., P.E.; Douglas T. Reindl, Ph.D., P.E.

2011 ASHRAE TECHNOLOGY AWARDS

- 44** Hospital Upgrade: Heat Recovery, Geothermal Save Energy
By Jack Kafesdjian, Eng.
- 48** Cool Weather Savings: Using Hybrid Refrigeration Systems for Chiller Retrofit
By Peter F. Bailey; Walt Joncas; Greg Dodge

About the Cover

ASHRAE President Ronald E. Jarnagin received his Bachelor of Science from Louisiana State University. He is standing in front of the Graham Tiger Tower at the LSU campus. He was a running back for the LSU Tigers in the 1970s.

Standing Columns

- 61** **Solar NZEB Project**
Equinox Meets Needs
By Ty Newell; Ben Newell
- 66** **Emerging Technologies**
Superinsulated Homes
By Alissa Cooperman; John Dieckmann; James Brodrick, Ph.D.
- 76** **IAQ Applications**
DOAS Misconceptions
By Stanley A. Mumma, Ph.D., P.E.
- 80** **Washington Report**
CBECS in Jeopardy?
By Mark Ames

Departments

- 4 Commentary
- 6 Industry News
- 10 Letters
- 16 Meetings and Shows
- 52 InfoCenter
- 75 Special Products
- 82 People
- 84 Products
- 86 Classified Advertising
- 88 Advertisers Index

ASHRAE® Journal (ISSN 0001-2491) **MISSION STATEMENT** | ASHRAE Journal reviews current HVAC&R technology of broad interest through publication of application-oriented articles. ASHRAE Journal's editorial content ranges from back-to-basics features to reviews of emerging technologies, covering the entire spectrum of professional interest from design and construction practices to commissioning and the service life of HVAC&R environmental systems. **PUBLISHED MONTHLY** | Copyright 2011 by the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle N.E., Atlanta, GA 30329. Periodicals postage paid at Atlanta, Georgia, and additional mailing offices. **LETTERS/MANUSCRIPTS** | Letters to the editor and manuscripts for publication should be sent to: Fred Turner, Editor, ASHRAE Journal, fturner@ashrae.org. **SUBSCRIPTIONS** | \$8 per single copy (includes postage and handling on mail orders). Subscriptions for members \$6 per year, included with annual dues, not deductible. Nonmember \$79 (includes postage in USA); \$79 (includes postage for Canadian); \$149 international (includes air mail). Expiration dates vary for both member and nonmember subscriptions. Payment (U.S. funds) required with all orders. **CHANGE OF ADDRESS** | Requests must be received at subscription office eight weeks before effective date. Send both old and new addresses for the change. ASHRAE members may submit address changes at www.ashrae.org/address. **POSTMASTER** | Send form 3579 to: ASHRAE Journal, 1791 Tullie Circle N.E., Atlanta, GA 30329. Canadian Agreement Number 40037127.

ONLINE at ASHRAE.org | Feature articles are available online. Members can access articles at no cost. Nonmembers may purchase articles at www.ashrae.org/bookstore. | **CUSTOM ARTICLE REPRINTS** | Reprints are available from The YGS Group, call 800-290-5460 or Email ASHRAEreprints@theYGSgroup.com. **MICROFILM** | This publication is microfilmed by National Archive Publishing Company. For information on cost and issues available, contact NAPC at 800-420-NAPC or www.napubco.com. **PUBLICATION DISCLAIMER** | ASHRAE has compiled this publication with care, but ASHRAE has not investigated and ASHRAE expressly disclaims any duty to investigate any product, service, process, procedure, design or the like which may be described herein. The appearance of any technical data, editorial material or advertisement in this publication does not constitute endorsement, warranty or guarantee by ASHRAE of any product, service, process, procedure, design or the like. ASHRAE does not warrant that the information in this publication is free of errors and ASHRAE does not necessarily agree with any statement or opinion in this publication. The entire risk of the use of any information in this publication and its supplement is assumed by the user.