

40th Annual Meeting of the International Institute of Ammonia Refrigeration (IIAR 2018)

2018 Natural Refrigeration
Conference & Expo

Colorado Springs, Colorado, USA
18 – 21 March 2018

ISBN: 978-1-5108-6385-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2018) by International Institute of Ammonia Refrigeration
All rights reserved.

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact International Institute of Ammonia Refrigeration
at the address below.

International Institute of Ammonia Refrigeration
1001 N. Fairfax Street,
Suite 503
Alexandra, VA 22314
USA

Phone: (703) 312-4200
Fax: (703) 312-0065

www.iiar.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

A REFRIGERATION SYSTEM USING AIR AS THE WORKING FLUID	1
<i>T. Davis, N. Ishitsuka</i>	
LARGE-SCALE FLAMMABILITY AND EXPLOSIVITY TESTING OF AMMONIA: IMPACT ON AMMONIA SAFETY IN REFRIGERATION APPLICATIONS	25
<i>S. Davis, J. Pagliaro, T. Debold, M. Wingerden, K. Wingerden</i>	
ULTRA-LOW CHARGE AMMONIA REFRIGERATION IN FOOD RETAIL: A SUCCESSFUL CASE STUDY	61
<i>K. Kuppusamy, A. Zimmermann</i>	
BEST PRACTICES IN MANAGING AND OSHA NEP OR EPA GDC INSPECTION	95
<i>E. Johnson</i>	
EMPLOYEE ENGAGEMENT AS AN INDICATOR OF PSM PROGRAM SUCCESS OR FAILURE	119
<i>J. Richter</i>	
EMERGENCY RESPONSE IN AN AMMONIA FACILITY	135
<i>C. Slininger</i>	
APPLYING BOW TIE DIAGRAMS TO UNDERSTAND THREATS AND BARRIERS IN INDUSTRIAL REFRIGERATION	151
<i>M. Timm</i>	
ENERGY AND FUNCTION ANALYSIS OF HOT GAS DEFROST IN AMMONIA REFRIGERATION SYSTEMS	171
<i>N. Vestergaard, M. Skovrup</i>	
FACTS AND MYTHS ASSOCIATED WITH CHOOSING THE RIGHT CONSTRUCTION MATERIALS FOR EVAPORATIVE CONDENSERS	215
<i>Z. Liu, R. Cunningham</i>	
STAINLESS STEEL PIPING IN INDUSTRIAL REFRIGERATION	243
<i>E. Teale</i>	
CONDENSADORES ENFRIADOS POR AIRE Y CONDENSADORES ADIABATICOS PARA SISTEMAS DE REFRIGERACION CON AMONIAO COMO ALTERNATIVA A LOS CONDENSADORES EVAPORATIVOS	283
<i>R. Lopez</i>	
INFLUENCIA A CAUSA DE LA FORMACION DE ESCARCHA EN EL EVAPORADOR Y SUS IMPLICACIONES TERMODINAMICAS	331
<i>C. Munoz</i>	
DISEÑO DE EVAPORADORES PARA EXPANSION DIRECTA (DX) CON AMONIACO	373
<i>B. Nelson</i>	
Author Index	