# METROPOLITAN NY CHAPTER Refrigeration Service Engineers Society

Continuing Education for the HVAC/R Industry

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"Better Service Through Knowledge" Novembert 2019

WWW.METRONYRSES.ORG



#### **PREVENTING REPEAT COMPRESSOR FAILURES**

When a compressor fails on a piece of refrigeration equipment, its troubleshooting and replacement is a relatively simple and common procedure. However, discovering *why* the original compressor failed may not be as simple. It is extremely important for the service technician to find an answer to this. Replacing the defective compressor without finding the cause can surely cause the replacement compressor to fail. Replacing the compressor a second, third or fourth time is not advantageous to the service contractor nor to the customer. It can cause the service contractor to lose money and, quite possibly, the customer.

n most cases upon original inspection of a defective compressor, it is difficult to determine what caused the compressor to fail. The compressor is not normally running and the system is not refrigerating. After replacing the compressor, the technician should spend time diagnosing why the original compressor failed. Usually with a detailed inspection, the technician should be able to find the cause. The inspection should include: checking the running suction and discharge pressures, the amount of superheat at the compressor inlet, the return gas temperature, the discharge gas temperature, the amperage draw and the applied voltage to the compressor. By comparing these readings to the manufacturer's specifications, the cause should be easily identified.

Some typical causes of a compressor failure are: liquid returning to the compressor, high return gas temperature, high discharge temperature or incorrectly applied voltage to the compressor. Most of these causes can be found, once the compressor is up and running.

There are times, however, when the apparent cause cannot be found upon start up. The technician should monitor the system's operation  $\frac{1}{2}$ 

for a period of time so he can find the cause. The problem may develop after the system has been running for some time; for example, during or after a defrost cycle, or as a result of an iced evaporator coil.

A nother helpful troubleshooting tool is to disassemble the defective compressor and examine the valve plates, pistons, crankshaft, bearing surfaces and windings. This can help immensely in confirming the cause of the original failure. Although this a time-consuming step, it is well worth the time and effort.

A lso helpful is for the technician to speak with the customer to get the prior history on the system's operation. Discovering if the compressor has been replaced prior to the tech's involvement, or if there has been any other major work done on the system, will aid in finding the cause.

Preventing repeat compressor failures is a must for any successful service contractor. Not only does it take away from the contractor's profit margin, but it also tarnishes their professional image. Finding the cause and repairing it not only keeps the customer happy, it keeps the contractor profitable.

Joe Marchese, CMS, Greater Pittsburgh Chapter, PA Past RSES International President

# **RSES Feature of the Month**

Learn safety from technicians just like yourself!! You can purchase the RSES safety video for only \$25.00. It has nine different light-hearted and funny safety tips. Each are 10-12 minutes long, about all things that we, as service techs, run into everyday. Order by phone, pay by credit card. Call 1-847-297-6464.





## <u>HVACR</u> <u>TECHNICAL</u> TRAINING

Coming to the Metro New York area

<u>Recommended for:</u> HVACR Service Techs HVACR Electricians HVACR Contractors HVACR Students Plumbers, Oil Techs

SATURDAY, November 16, 2019 8:30am – 5:00pm

## FULL DAY with Hot Lunch served

Location: Riccardo's Catering 21-01 24th Avenue Astoria, N.Y. 11102 (718) 721-7777

# ADVANCED HYDRONICS

<u>TRAINING</u> Getting Up To Speed On Today's Hydronics

Presented by:

Rick Koester, Contractor Support Specialist, Wales-Darby, Inc.

### YOU WILL LEARN:

#### DESIGN:

- System design
- Calculating Heat Loss
- Choosing the correct equipment for the job
- New Installation or Retrofit systems??

#### BOILER ROOM:

- Near boiler piping
- System components
- System Piping
- Circulator selection
- Circulators or zone valves??

#### TROUBLESHOOTING:

Finding the elusive root causes of those nagging & persistent problems

These programs utilize lecture, field examples, computerized demonstrations, handout materials and encourages audience participation. A certificate of completion will be mailed to all participants.

The cost for full program, including morning & afternoon refreshment breaks and full service, hot sit-down lunch is: \$150 - (\$125 for RSES, PHCC & OESP members)

#### Brought to you by: R.S.E.S. REFRIGERATION SERVICE ENGINEERS SOCIETY METROPOLITAN NY CHAPTER

For Further Information Call: Stan Hollander @ 718.232.6679

REGISTER EARLY - SEATING LIMITED					
ADVANCED HVDRONICS TRAINING _ 11/16/19					
RSES Membership # (if applicable)					
NAME	COMPANY NAME				
ADDRESS	CITY	STATE	ZIP		
PHONE:	EMAIL:		_		
WANT TO USE CREDIT CARD? #		EXP. DATE	E		
MAKE CHECKS PAYABLE TO: <u>METRO NY RSES (or call 718 232-6679 w/info)</u>					
MAIL CHECKS ALONG WIT	H THIS REGISTRAT	TION FORM (DETA	<u>CHED)</u> TO:		
STAN HOLLANDER;	1837 61 <sup>st</sup> STREET,	BROOKLYN, NY 1	1204		



#### **METROPOLITAN NEW YORK CHAPTER, RSES** For Information Call: Stan Hollander, CMS (718) 232-6679

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In the unlikely event of scheduled meeting cancellations, announcement will be posted on our web site

# Wednesday November 13th, 2019

RICCARDO'S 21-01 24th Avenue, Astoria NY 11102

# WiFi Thermostats and Heat Pumps -Selling Efficiency and Comfort in the 21st Century

<u>By:</u>

Rich Bruno - RSES Education

# PRESIDENT'S MESSAGE

We need your help. The only way we are able to avoid raising dues is thru the seminars we run. Enclosed is an application for our November 16th seminar "*Advanced Hydronics <u>Training</u>". Please consider attending, and also pass it on to anyone you think might be interested in this informative and useful educational program.* 

At this November meeting, we will have the election of officers.

Your current board proposes the following slate of officers:

President: Drew Garda Vice President: Herbert Meyer Secretary: Rich Bruno

Treasurer: Steven Aiello Sgt. at Arms: Kurt Eggert Educational Director: Stan Hollander, CMS