

Registration Form
Name_____

Title_____

Company_____

Address_____

City_____

State/Province_____

Zip/Postal
Code_____

Phone_____

Email_____

**Registration Amount -- \$649 Members
\$749 Nonmembers**

Registration form cannot be accepted without accompanying payment either via online registration or in the form of a check. If registering by mail, send completed form and check in U.S. funds to AARS, PO Box 200, LaFox, IL 60147. All reservations must be received in the AARS office by October 14, 2019. After that date, reservations will be accepted on a first-come, first- served basis. All cancellations are subject to a \$75 service charge. HOTEL RESERVATIONS: Hotel reservations must be made directly with the **Sheraton** O'Hare 6501 Mannheim Rd, Rosemont, IL 60018 Phone: (847) 699-6300 specify your attendance at the AARS Derailment Seminar to obtain the special rate of \$149/night.

Who should attend:
Railroad Managers
Superintendents
Trainmasters
Field Engineers
Mechanical Officers
Railway Engineers
Local, State & Federal Officials (FRA, DOT)
Industrial Plant Managers
Engineering Consultants
Environmental Specialists

Why attend:
By attending the AARS Derailment Seminar, participants will gain:

A working knowledge of basic track structure, performance, causes of common problems;

Examination of detail on axle loads, traffic density, operating speeds;

Optimal learning potential with presentations on railroad turnouts, crossings with details handling spots;

More effective on the job performance, using course-provided critical information;

Practical answers to your basic questions about yard derailments;

The latest information about methods and technologies used in current railroading practice and applicable rules, regulations, and standards.

The American Association of Railroad Superintendents

Presents

Derailment Investigation

By

**Mr. Gary Wolf,
Wolf Railway
Consulting**

**November 5-6,
2019**

**Sheraton O'Hare
Chicago**

***Register online at
www.supt.org***

Tuesday Nov. 5

8:00 Introduction

Course Objectives and Goals
What is a Derailment?
Derailment Myths and Misconceptions
Industry Statistics
L/V Ratio
Wheel Climb Factors
Rail Rollover Factors

10:00 Break

10:15 Track and Engineering Issues

Elements and Basics of the Track Structure
Rail Identification
Rail Wear and Effect on Rollover Potential
Broken Rail Derailments
Fasteners (Spikes and Clips)
Crossties, Differential Plate Cutting

12:00 Lunch

1:00 pm Continuation of Track Issues

Ballast and Subgrade
Rail Anchors
Track Buckle Derailments
Curve Superelevations Issues
Switches & Turnouts (Wedges)

2:30 Break

2:45 Continuation of Track Issues

Rail Lubrication
Track Crosslevel and Twist
FRA Track Safety Standards – Gage, Crosslevel, Elevations, Horizontal Alignment, Recording And Plotting Measurements

4:30 Mechanical Issues

Car and Casting Identification
The Anatomy of the Three Piece Truck
Side Frame Bottoms
Purpose of Friction Dampers (Wedges)

5:00 Adjourn

Wednesday, November 6

8:00 Continuation of Mechanical Issues

Wedge Rise, Harmonic Rock and Roll
Vertical Bounce, Track Hunting,
Curving Mechanics and the Warped Truck

10:00 Break

10:15 Continuation of Mechanical Issues

Conventional Side Bearings
Influence of Tight Side Bearings On Derailments
Constant Contact Side Bearings
Centerbowl/Centerplate Issues
Stiff Truck Derailments
New Car Syndrome

12:00 Lunch

1:00 pm Continuation of Mechanical Issues

Frame Bracing Issues
Wheels:
Thin/Vertical Flange, Tread Wear, Wheel Profile Issues, Wheel Flange Angle, Hollow Worn Wheels, Wheel Tapes

Back-to-Back Measurements
Bearings and Bearing Adapters
Roller Bearing Failure Derailments
Mechanical Inspections Forms and Data

2:00 Track/Train Dynamic Issues

Air Brake Issues, Emergencies and UDE's
Locomotive Independent Brake Issues
How to read and interpret Event Recorder Data
Excessive Draft Force, Stringlining
Excessive Buff Force, Jackknifing, Rail Roll Over

Tractive Effort
Dynamic Breaking Effort
Slack Action Derailments
Train Make-Up and Car Placements

3:00 Break

3:15 Human Factor Causes

Statistics and Typical Causes
A Systematic Approach to Human Factor Derailments
Team Approaches to Prevention of Human Factor Causes

Tuesday, continued

4:00 Site Investigation Techniques (The Derailment Dozen)

Overview – 12 Steps to a Successful Investigation

- Safety at Site
- D&A Testing
- Train Documentation
- Crew Interview
- Photo/Videos
- Metallurgical Specimen Handling
- Event Recorder Data
- Finding the POD
- Using Rail Marks as Investigative Tools
- Finding First Wheel to Derail
- Car/Mechanical Measurements
- Track/Engineering Measurements

5:00 Adjourn

**Presented by:
The American
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Superintendents**

www.railroadsuperintendents.org