Preparing
for a
Troubleshooting Competition

"What You Need to Know"

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TECHNICAL + TRAINING SERVICES

North American Process Technology Alliance
NAPTA™

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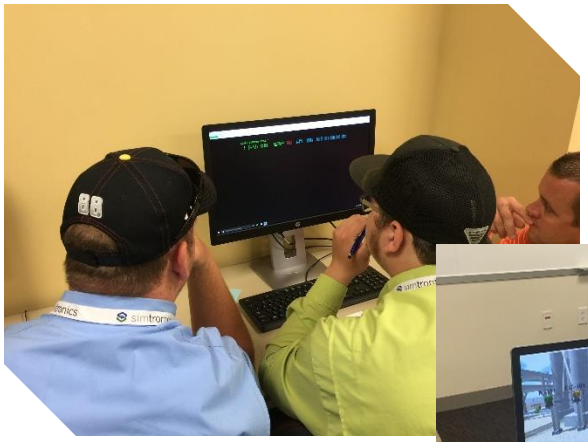
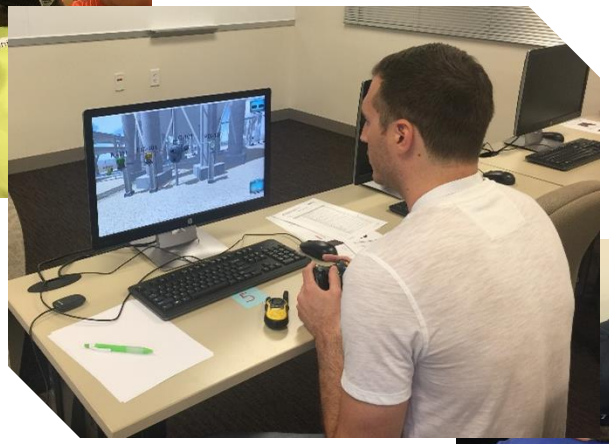
ISC IX, 2018

Preparing for a Troubleshooting Competition





Session Objectives

- Definition of Troubleshooting
- Competition Structure & Format - ***Changes***
- Competencies Needed for Success
- Coach a Troubleshooting Team
- Insider Tips
- Resources Colleges Need to Compete

2019 Format Update

- Scholarship Awards
- Teams will be comprised of 4 members plus one alternate
- Choose your alternates carefully
- Twenty Semi-Finalist Teams
- Ten Finalist Teams
- Final Competition Models Announced Two Weeks Prior to Event
- 2.5 day event – Registration opens Thursday afternoon
- Semifinal Round Friday April 26
- Final Round of Competition Saturday April 27
- More Comprehensive Industry Networking Time
- Awards Dinner Saturday Evening

Competencies for Success

- Process Equipment Knowledge
- Process Control Knowledge
- Team Work and Communication
- Use of a Troubleshooting Methodology
- Simulator Experience
- Use of Operating Procedures
- Time Management Skills

Coach a Troubleshooting Team

- **Knowledge**
  - ✓ Process science (pressure, temperature relationships, heat exchange, mass balance, etc.)
  - ✓ Process equipment and control systems
  - ✓ Read P&IDs
- **Team Selection**
  - ✓ Begin your team formations now – Don't wait until January!
  - ✓ Student commitment
  - ✓ Team work
  - ✓ Communications skills
  - ✓ Dedicated, hard working
  - ✓ Hold intramural competition to choose best team(s)
- **Practice, Practice, Practice**
  - ✓ Paper
  - ✓ Simulator

Resources Required

- Student commitment to traveling and competing at the Finals Competition
- Time outside of class to study, prepare and practice
- Opportunity to run “mock” competition
- Access to a process simulator to practice computer simulations
- Learning a troubleshooting method/completing troubleshooting class.

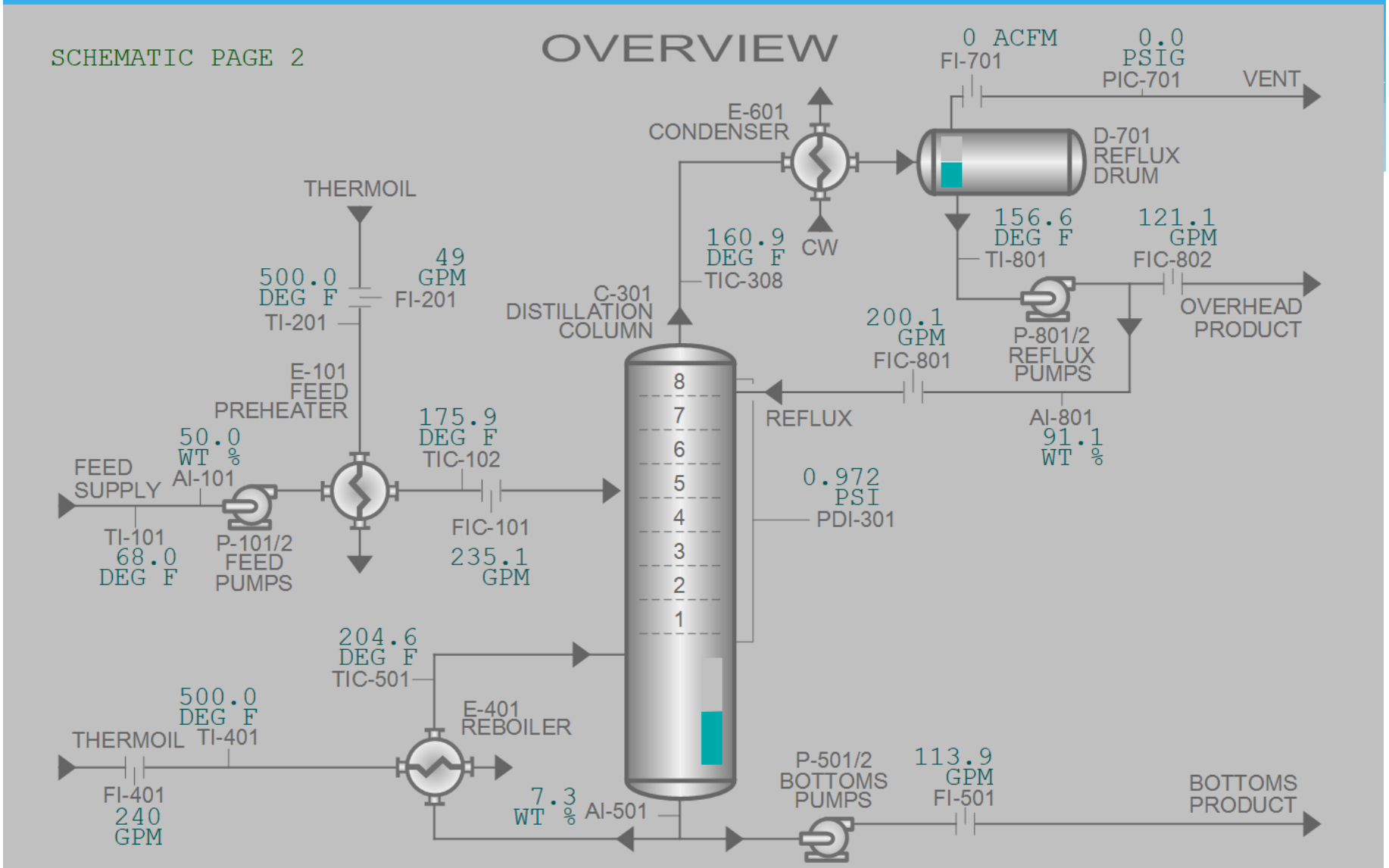
Insider Tips

- Team communication and dynamics
- Know how to use the simulator
  - ✓ Operate from the graphics
  - ✓ Faceplates
  - ✓ Trends
  - ✓ Alarms & alarm acknowledgement
- Not all scenarios start at 1:00
- We introduce variability to avoid the “steady state” of normal design
- Not just one thing can go wrong, but not everything has the same priority
- Know how to use procedures

Let's Troubleshoot!

- Divide Into Teams of 4
- Complete the Worksheet
  - ✓ Review Process Information
  - ✓ Gather Data
  - ✓ Identify Probable Cause(s)
  - ✓ Determine Compensating and Corrective Action(s)
- Group Discussion & Debrief on Exercises

Let's Troubleshoot



Questions


2018 NAPTA Troubleshooting Skills Competition
Finalist Teams & Support Staff

More Information to Come

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