



NACE[®]
INTERNATIONAL

**GAS CAPITAL
SECTION**

**Spring Gas Capitol Rectifier School
March 27-29, 2012**

R.M. Speck - Universal Rectifiers, Instructor

R.M. Speck, a long standing member of NACE, has been working in the rectifier business for more than 53 years (12 as general manager in charge of Research and Development in the Solid State and Solar Power Divisions of his former company). Mr. Speck's present company, Universal Rectifiers (founded by him in 1980), is recognized as the largest producer of cathodic rectifiers in the U.S.A. He has been instrumental in the production of more than 250,000 rectifiers and continues to devote time to innovations for the industry.

Sponsored by the

Gas Capitol Section of NACE International

in association with

**Seward County Community College/Area Technical School
Business & Industry Office**

Rectifier School Committee

Lonnie Broce, Fanisher Corrosion Service; Tommy Duncan, Jacam Chemicals, LLC; Mel Fry, Jr., WTG Hugoton LP; Billy Higgins, Enterprise Pipeline, LLC.; Alan Leclair, Northern Natural Gas Co.; Butch McPhail, Blackhills Energy; Curt Near, Corrpro; Ted Patton, Blackhills Energy; Jay Salmans, Northern Natural Gas Co; Monte Stebens, Northern Natural Gas Co.; Rick Werner, Magellan Midstream Partners, LLC; William Worley, SCCC/ATS; Norma Jean Dodge, SCCC/ATS; and Lori Clay, SCCC/ATS

Enrollment Form

Name: _____ Are you a NACE Member? Yes No

Company: _____ Title: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____ Email: _____

Registration Fee: \$300 (Class size is **limited** to **40** students). Please enroll by **March 16, 2012**. Refunds, requested in writing, will be made if requested by March 20, 2012.

To register: CALL 620-417-1170, **FAX** registration to 620-417-1179, or **MAIL** registration form to Seward County Community College-Area Technical School, Business & Industry Office, PO Box 1137, Liberal, KS 67905-1137.

QUESTIONS call 620-417-1170 or email b&i@sccc.edu.

- Check enclosed** - # _____ Please make check payable to SCCC/ATS.
- Bill my company:** Attn: _____
Billing Address, if different than above: _____
- Bill my:** American Express Discover MasterCard Visa **Amount:** _____
Card # _____ Print Name on Card _____
Expiration Date: _____ Signature: _____

Gas Capitol Rectifier School

Student Union Building • Conference Room • SW 229 C&D

March 27, 2012

- 7:30 a.m. Registration
- 8 a.m. Welcome Gas Capitol Section NACE
- 8:30 a.m. Rectifiers and Their Applications, Styles, Types & Features
- 9:30 a.m. Technical Session – Theory, OHMS Law, Basic Cathodic Protection, Potentials (“On” Potentials, Instant Off, IR Drop Free)
- 10:30 a.m. Rectifier Component Design and Operation-Silicon, Selenium, Surge Protection, Breakers/Fuses
- 1 p.m. Continuation of Components – Typical Failures and Troubleshooting Techniques
- 2:30 p.m. Special Purpose Rectifiers – Three Phase, Constant Current, Potential Controlled, Multiple Circuit, Switchmode Rectifiers, Remote Monitoring
- 3:30 p.m. Wiring Diagrams and Schematics – Typical Rectifier Types
- 4 p.m. Grounding and Safety Issues – Method for Checking Grounding
- 4:30 p.m. End Day One

March 28, 2012

- 8 a.m. Review and Discussion – Review of Day One and Questions from Attendees
- 8:30 a.m. Rectifier Efficiencies – Conventional and Wattmeter, Power Factor, Improvements
- 10 a.m. Rectifier Maintenance – Preventive, Maximum Operation Limits
- 11 a.m. Troubleshooting – Standard Units, Special Purpose Rectifiers
- 1 p.m. Hands-On Troubleshooting – Analyze Various Problems and Perform Repairs
- 3:30 p.m. General Discussion – Hands-On Review (Short Cuts, Tips, etc.)
- 4:30 p.m. End Day Two

March 29, 2012

- 8 a.m. Rectifier Class Wrap-Up (Miscellaneous Topics, Rectifier Pricing vs. Size, etc.) – General Round Table Discussion
- 8:30 a.m. Written Test – Basic (Self Grade)
- 9:30 a.m. Certificates and Door Prize Drawing (Cash Drawing)
- 10 a.m. Open discussion on any aspect of corrosion science (theory, equipment, application etc.). This part of the school is for the student’s general or specific knowledge and growth. Also, an outdoor lab is available and a good selection of test equipment. Committee members will be available for these discussions so bring all your questions and if we can’t answer them, we’ll find out who can.

**** Please let us know how to improve; we will draw one name from those filling out the evaluation form and give that person \$25****

Emergency Contact Number: SCCC/ATS main switchboard number is 800-373-9951 or the Business & Industry Office is 620-417-1170.

Lunch: Lunch will be from 11:30 a.m. to 12:30 p.m. each day. Morning and afternoon refreshments will be provided. NACE will be sponsoring a social hour/dinner on March 27, time and location to be announced.

Lodging Information: You are responsible for your own room reservations. Hotel/motels in Liberal include: Budget Host LaFonda, 620-624-5601; Days Inn, 620-626-7377; Hampton Inn, 620-604-0699; Holiday Inn Express, 620-624-9700; Liberal Inn, 620-624-7254; Quality Inn, 620-624-0242; or the Super 8 Motel, 620-624-8880.

**** Please bring your multimeter for the hands-on session****



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Business & Industry Office
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PO Box 1137
Liberal, KS 67905-1137