Upcoming Events:
February 19th - “Selected Failure Investigations from Materials Camp” - Dr. Dan Dennies
March 19th - “Casting Defects and Repairs - Common Problem on New Construction Projects” - Cathleen Shargay

Driving Directions to Irvine Duck Club
Going Northbound on 405:
1. Take Culver Drive exit.
2. Turn Left on Culver Drive
3. Turn Right on University Drive
4. Turn Right on Campus Drive
5. Turn Right on Riparian View
6. Destination will be on the left

Going Southbound on 405:
1. Take Culver Drive exit.
2. Turn Right on Culver Drive
3. Turn Right on University Drive
4. Turn Right on Campus Drive
5. Turn Right on Riparian View
6. Destination will be on the left

2012-2013 Executive Committee
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February Meeting Details:
Selected Failure Investigations from Materials Camp
Dr. Dan Dennies
Senior Managing Engineer - Exponent

6:00pm: Dinner and Technical talk to follow
Where: Irvine Duck Club
5 Riparian View
Irvine, CA 92612
Cost: ASM Members - Free!
Non-Members - please contact

Please RSVP to: asmorangecoast@gmail.com

Abstract:
Dr. Dennies is an advocate for volunteerism and STEM. Fifteen years ago he combined these pursuits by becoming one of the founding members of the Materials Camp for High School Students at the ASM Headquarters in Materials Park, Ohio, now called the Eisenman Camp. In addition, Dr. Dennies started the Materials Camp for Teachers in Los Angeles ten years ago. In 2014 there will be over 70 Materials Camps for Students and Teachers across the nation.

The Eisenman Materials Camp is a weeklong camp in which the primary goal is to introduce high school students to the world of materials, science, and engineering. Thirty high school students from all over the world are brought to the camp and divided into teams of five or six students. The vehicle for this introduction to materials, science, and engineering is a failure analysis supplied by the Materials Camp Materials Mentor. The camp introduces the students to the technical aspects of a failure analysis in the form of short lectures on materials, failure analysis, and manufacturing processes. The camp also uses hands-on application to introduce equipment such as the scanning electron microscope, light microscopy, metallographic preparation and interpretation, and various mechanical testing apparatus. In addition, the students learn about failure analysis planning and organization, group dynamics and making decisions as a team.

The Materials Camp is designed to be fun and informative. The one constraint is time. In four days time, the students are expected to present the results of their failure investigation to members of industry, college professors and various members of the Board of Trustees of the ASMI Society and Foundation. The audience is usually over 150 people.

In this presentation Dr. Dennies will present selected Failure Investigations from his teams form the past 14 Materials Camp. He will strive to perform the presentation as well as the students did.
February Event Details
February 19th, 2014

Selected Failure Investigations from Materials Camp
Dr. Dan Dennies, Senior Managing Engineer - Exponent

Biosketch: Dr. Daniel Dennies is a Senior Managing Engineer in Exponent’s Materials and Corrosion practice. He is a licensed metallurgical Professional Engineer (P.E.) in the state of California. Dr. Dennies has over 30 years of experience in various raw material, forging, aerospace, and aircraft related industries as a technical specialist, technical manager, and program manager. The majority of his career has been in the aerospace industry working on projects such as the Space Shuttle Main Engine, the National Launch System, the National Aerospace Plane, expendable launch systems like Delta and Titan, and the International Space Station. He has also worked on other projects including commercial aircraft such as the Boeing 787, military aircraft such as the C17 Transport and B1-B Bomber, proprietary programs such as the Ground Based Missile Defense and the X-37B Experimental Reusable Unmanned Space Plane. In addition he has worked on projects concerning the biomedical devices, fasteners and energy industries. Dr. Dennies has accumulated experience with a wide variety of materials, processes and test mechanisms through his association with the design, testing, failure analysis, and manufacturing aspects of these programs. His broad areas of expertise include failure analysis, engineering design support, material and process selection, material testing, customer or supplier interaction, and program development and management. He is a member of multiple professional organizations, where he has served on the board of trustees and several national committees, many as chairman. He has over 10 professional awards and was awarded a patent in 1988. Dr. Dennies has taught multiple courses a year since 2000, has given numerous technical presentations, and is highly published including a book on failure analysis in 2005.

Future Events:

March 19th, 2014

Casting Defects and Repairs - Common Problem on New Construction Projects
Cathleen Shargay, Technical Director/Supervisor - Fluor Enterprises

Abstract: This presentation describe nine case histories (many with multiple castings) where casting defects, rejections or repairs caused significant impacts to project costs and/or schedule. All these cases involved alloys, such as Cr-Mo low alloy steels, 300 series stainless steels or nickel-based alloys. The defects were detected during either installation or during plant hydrotesting. Three root causes have been defined, namely casting defects due to poorly designed molds or inadequate casting procedures, improper heat treatment and contamination from scrap. Various improvements are being tried, and some industry standards are being revised to add additional quality control and assurance, but more widespread application of these steps is needed.