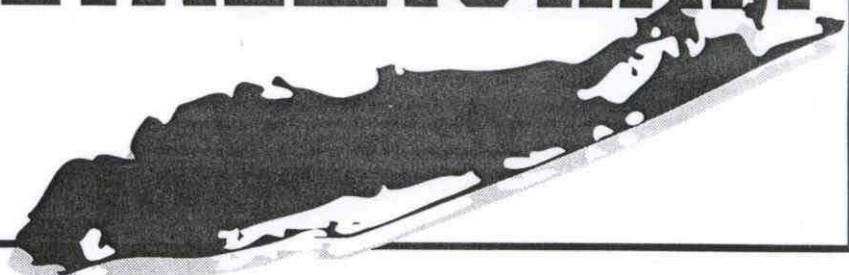




METALLAGRAM

LONG ISLAND CHAPTER



Volume 45 Issue 4

Editor: Carl Czajkowski

Joint Meeting with the American Nuclear Society (Long Island Section)

Wednesday, January 7, 2004

WHERE Brickhouse Brewery, Patchogue, NY

Topic: "To Lift Or Not To Lift? That Is The Question..."

Speaker: Dr. Carl Czajkowski
Energy Sciences and Technology Department
Brookhaven National Laboratory

Social hour ... 6:00 pm Dinner ... 7:00 pm Meeting ... 8:00 pm.

Members ... \$22 Guests ... \$25 ASM 25 years ... \$20 Students ... \$12

(New and recently transferred-in members free!)

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DIRECTIONS TO THE BRICKHOUSE BREWERY

The pub/restaurant is located at 87 West Main Street in Patchogue. From either the Long Island Expressway or the Sunrise Highway, Take Rt. 83 (Ocean Avenue) south to the intersection with Main Street then turn right. The Brickhouse Brewery is about one block west, on the right. Their telephone number is (631) 447-BEER. There is a free parking garage adjacent to it and on-street parking in the immediate vicinity. Reservations appreciated - call Mel Cowgill at (631) 344-2082 or email cowgill@bnl.gov.




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THE TOPIC

The High-Flux Beam Reactor (HFBR) began operation at Brookhaven National Laboratory in 1965 and shut down in the 1996. The design of the HFBR includes both an upper (UTS) and a lower thermal shield (LTS) surrounding the vessel. The LTS has been an integral part of the HFBR since start-up. It is a welded structure that has been exposed to both neutron and gamma irradiation for over 30 years. The shield is 11 ft. high, and has an outside diameter of 9 ft. and an inside diameter of 7.5 ft. The wall is 9 inches thick and is composed of 3 inches of steel plate, 1¼ inches of cooling water, and 4¾ inches of lead. The LTS weighs 110,000 lbs., of which the lead contributes 70,230 lbs.

It has been suggested that the LTS be removed as a complete, coherent structure in a single crane lift. The task at hand has been then to ascertain if sufficient radiation embrittlement had occurred to the LTS to preclude its removal from the HFBR in this manner. This has a bearing on the future methods of decommissioning and dismantling of the HFBR.

This talk will discuss the fracture mechanics (don't let this scare you, they will be really simple) involved in making the "lift or not to lift" determination, in addition to some discussions on the more interesting radiation embrittlement mechanisms that were occurring in the HFBR.

OUR SPEAKER

Dr. Czajkowski is a Metallurgist in the Energy Sciences and Technology Department, Brookhaven National Laboratory. He has a BS in Metallurgical Engineering from the University of Missouri/Rolla, a MS from the Polytechnic Institute of New York, and a PhD in Materials Science and Engineering from SUNY/Stony Brook. He began his career in 1971 as a Quality Control Materials Engineer at United Nuclear Inc. then, in 1973, moved to EBASCO Services Inc. as a Quality Assurance Engineer. 1975 saw him join LILCO as a Lead Mechanical QA Engineer, moving up to become Chief Welding Supervisor at the Shoreham Nuclear Power Station. Carl joined Brookhaven in 1980 and has held positions (Group Leader, Associate Division Head, and Division Head) since then in the Departments of Nuclear Energy, Advanced Technology, and, currently, Energy Sciences & Technology. He is an established expert in the field of failure analysis and nuclear materials. Carl is a long-time member of ASM International, and served as Chairman in 1992-1993 and 1994-1996. He is also an active member of the American Nuclear Society (serving as an elected member of the Nuclear Materials Committee), and The Metallurgical Society. He is an Adjunct Professor at Stony Brook University. His current work is focused on the problems facing Homeland Security.

WELCOME TO THE CHAPTER!

Arthut Beach, Beach-Ross Co.

Raj Gupta, New York City Transit Authority

Samuel Hochman, Links Ventures Inc.

Robert Hones, Charles A. Hones Inc.

Raja Nayak, Beach-Ross Co.

Barry Reznik, Cotronics Corp.

All new members, including those who have transferred in from another Chapter, are invited to dine free at a regular meeting of their choice. Please take us up on this offer - come along to the meeting and introduce yourself. This is an excellent way to meet with other Chapter members and establish new business and social relationships in the area. Our meeting locations range from Manhattan to Mattituck so there's likely to be one not too far from you at some point during the year.

ASM Materials Camp

As mentioned in the last issue of the METALLAGRAM, Henry White is putting together an ASM Teachers' Materials Camp to be held on Long Island. The camp is provisionally scheduled for August 2-8, 2004, to be held at Stony Brook University. Anyone wishing more details should contact Henry at (631) 632-3234. Offers of assistance, either in helping to staff the camp or providing sponsorship, would be most appreciated

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CHAPTER MEETING SCHEDULE

Long Island Chapter

2/18/04 Past Chairs Night; speaker Atul
3/17/04 Sustaining Members Night; speaker Andrew Nicoll
4/21/04 Annual General Meeting/Plant tour of Sulzer Metco/speaker Jason Trelewicz

Metro NY-NJ Chapter
(contact Rich Lynch @ 201-891-8399)

2/11/04 L'Affaire Restaurant, Springfield, NJ.
Speaker Sheldon Cytron
Topic: How Materials Technology has changed Military Weaponry
3/17/04 San Carlo Restaurant, Lyndhurst, NJ.
Speaker Toni Bailey (Structural Testing Systems) and Ed Dukich (Level III Resources)
4/21/04 L'Affaire Restaurant, Springfield, NJ.
Speaker: Stuart Nichols
Topic: Stealth Technology

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