



## 15TH ANNUAL HYDROGEN EMBRITTLEMENT WORKSHOP

Sponsored by ASTM Committee F07.04 on Hydrogen Embrittlement

November 7, 2019  
 Marriott Marquis  
 Houston, TX, USA

Workshop Chairmen:      Salim Brahim  
    Industrial Fasteners Institute  
    Independence, OH, USA

Sriraman Rajagopalan  
 McGill University & IBECA Technologies  
 Montreal, QC, Canada

**THURSDAY, NOVEMBER 7, 2019**  
 (8:00am – 5:00pm) \*

<b>Presenter</b>	<b>Topic</b>
<b>Ed Babcock</b> Boeing Research and Technology Mesa, AZ	Hydrogen Embrittlement Testing with Self Loading Fixtures, Round Robin Results
<b>Craig Willan &amp; Kyle Smith</b> OMEGA Research Eules, TX	HYDROGEN EMBRITTLEMENT FAILURES - A Large Statistical Data Base Review of Sustained Load Hydrogen Embrittlement Testing per ASTM F519
<b>Chad Hogan</b> USAF – Hill Airforce Base Salt Lake City, UT	TBD
<b>Jeremy Hall</b> ES3, Salt Lake City, UT	Quick and Reliable Hydrogen embrittlement testing

---

\* Workshop starts at 8:00 a.m.; 15-minute Coffee Break between 9:45 and 10:15 a.m.; Lunch from 12:00 to 1:00 p.m.; 15-minute Soft Drinks Break between 2:45 and 3:15 p.m.; Workshop will end at 5:00 p.m. or earlier depending on length of the speakers' presentations and Q&A periods.

<b>BREAK</b>	
<b>Herman Amaya</b> Schlumberger, 3MT	A Fracture Mechanics Approach to Characterizing Hydrogen Embrittlement of Fasteners
<b>Sheldon Landsberger</b> University of Texas Austin, TX	Quantitative Analysis of Hydrogen Embrittled Materials used in Subsea Oil & Gas Components under Cathodic Protection using Prompt Gamma Activation Analysis
<b>Carmen Vertulo</b> AIM Testing Laboratory El Cajon, CA	HE Risk Management Throughout the Supply Chain
<b>Tuhin Das</b> McGill University Montreal, QC, Canada	A Multitrap FEA Model to Study Hydrogen Embrittlement (HE) Susceptibility of High Strength Steels
<b>Jonathan A. Lee</b> NASA-Marshall Space Flight Center Huntsville, AL	Proposed Change to ASTM G142-98 (2016) Standard Test Method for Determination of Gaseous Hydrogen Embrittlement of Metals
<b>BREAK</b>	
<b>Priyadarshi Behera &amp; Sriraman Rajagopalan</b> McGill University & IBECA Technologies Montreal, QC, Canada	TBD
<b>Salim Brahimi</b> IBECA Technologies / IFI / McGill University Independence, OH, USA	TBD

---

\* Workshop starts at 8:00 a.m.; 15-minute Coffee Break between 9:45 and 10:15 a.m.; Lunch from 12:00 to 1:00 p.m.; 15-minute Soft Drinks Break between 2:45 and 3:15 p.m.; Workshop will end at 5:00 p.m. or earlier depending on length of the speakers' presentations and Q&A periods.