The 8th Annual Conference of the PHM Society

phmsociety

Panel Discussion on:

Smart Manufacturing PHM

5-Oct-2016, 10:30 AM - 12:00 PM MDT

Facilitator: Brian A. Weiss

Smart Manufacturing PHM

Courtesy: Scott Adams

- 10:30 – 10:35: Smart Manufacturing Panel Introduction
  - Goals
  - Purpose
- 10:35 – 11:05: Panelist Presentations (< 8 min each)
  - Introductions
  - Perspectives
- 11:05 – 12:00: Discussion
  - Audience engagement
  - Q&A

Panel Description

As manufacturing environments become more complex, **fault and failure opportunities increase throughout the factory**. Manufacturing complexity can stem from many factors including greater **flexibility and reconfigurability in manufacturing processes** (to leverage new technology and/or support product customization). This complexity forces manufacturers to **assess and re-assess areas of risk** within their manufacturing processes. Those areas of **greatest risk often become ideal targets for PHM**. Including PHM (i.e., condition monitoring, diagnostics, and prognostics) can increase operational efficiency and decrease downtime. This panel both builds on the discussions of the experience and processes from the Standards Experience for Manufacturing Panel and highlights some **specific challenges, needs, and wants with respect to the development and implementation of standards and guidelines with respect to PHM**. This diverse group of panelists **present their standards and guidelines perspectives on PHM within Smart Manufacturing**. Conversations will include PHM's current and envisioned applications within factory environments along with how the needs, data stream, and supporting PHM tools, can be better designed, developed, implemented, verified, and validated to impact smart manufacturing.

Panelists

- David Siegel (Predictronics)

- Al Salour (The Boeing Company)

- Tom Bugnitz (Manufacturer's Edge)

- Joel Niedig (ITAMCO)

How do we Claim Success?

- Achieve a greater understanding of specific needs and wants of the manufacturing community with respect to standards for smart manufacturing

- Understand where we can leverage existing standards and where new standards need to be created

- Understand the standards priorities of the manufacturing community and begin to identify links between standardization and improved productivity, efficiency, quality, asset availability, etc.

Conversation Starters…

- What are the biggest successes (and subsequent impacts, if realized) you have witnessed within your organization and/or with respect to PHM-based standards/guidelines you may have deployed within a manufacturing environment? Or if you are still developing standards/guidelines systems, what impact(s) do you hope to have?

- What are your biggest challenges in developing and/or implementing new standards/guidelines for PHM within manufacturing operations? This can be specific to your domain/application area (e.g. software, sensors, robotics, machine tools, etc.)

phmsociety Conversation Starters Cont....

- Where are standards/guidelines most needed in the manufacturing environment that, if successfully deployed, would advance the state-of-the-art of PHM (and improve manufacturing operations) in the near-term? This can also be specific to your domain/application area and you are encouraged to highlight specific processes, equipment, or manufacturing technologies, as appropriate.

- What experiences have you had, if any, with unsuccessful deployments of standards/guidelines (they were rejected) or implemented standards being discontinued after a certain period of time? What factor(s) made these standards unsuccessful?

phmsociety Conversation Starters Cont....

- From your perspective, what are some of the biggest differences (and/or challenges) between large enterprises v. small to medium-sized enterprises (SME) developing, implementing, and promoting standards/guidelines throughout manufacturing operations? Similarly, you could ask this question in comparing large manufacturing operations to small manufacturing operations within the same organization.

Subject Matter Experts Wanted for ASME's Advanced Manufacturing Standards Committee

Based on discussions that took place between numerous stakeholders, including the United States Department of Defense and the National Institute of Standards and Technology, the Board on Standardization and Testing is currently working on a proposal to form a new Standards Committee on Advanced Manufacturing. The new standards committee would look into development of standards that define which data is required in a 3D data set; define how a CAD/CAM 3D model and its associated technical data should be structured; enable enhancement of maintenance and control strategies within manufacturing operations at the factory-floor; and explore other issues as they evolve.

This effort reflects a growing interest among standards development committees to advance new manufacturing technologies and methods. ASME is currently soliciting subject matter experts and affected stakeholders to help support these efforts.

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