



January 2014
ASM-AFS-SWE Joint Technical Meeting



Monday, January 13

An Overview of A Remanufacturing Business

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Date: Monday, January 13, 2014

**Location: Barrack's Cater Inn, 1224 W. Pioneer Parkway,
Peoria, IL 61615**

4:30pm Check-in/Social Hour
5:30pm Technical presentation
6:30pm Dinner

Free Parking is available. The cost of the dinner is subsidized and will be \$18 at the door (\$0 students) for ASM-AFS members, \$24 for other attendees (\$7 non-member students). **RSVP to Michael A. Adashek (Adashek Michael A@cat.com or 309.578.1974) by 01/09/2014.**

Abstract:

The term "Remanufacturing" conjures up different ideas for different people. For many, it's a positive recycling concept, necessary for sustainable and economic solutions to extending the life of products. This talk will review important ingredients for a successful remanufacturing business, focusing on a heavy equipment product line.

The process must start with designing for remanufacturability: understanding design factors, wear surfaces, disassembly and remanufacturing technologies. Cleaning is also critically important to enable accurate inspection as well as subsequent processing. Evaluation techniques range from dimensional checks to crack inspection. Bringing a product up to the original technical specifications can be achieved in a variety of ways (e.g.: inserts, machining, thermal spray, recasting, welding.... etc.). As with new products, these processes must be managed with good quality control and possibly in-factory validation checks.

There is also a significant commercial work that must accompany the process. Countries have different rules for exporting used material and importing "remanufactured" goods. Depending on the market incentive to return used material, there is often a financial deposit required. Cost accounting is complicated by the various incoming material streams and sometimes custom processes required for a particular part. Pricing and warranty, especially relative to an equivalent new product, require market-based strategy.

Remanufacturing is increasing, expanding from industrial, heavy equipment and automotive products to office furniture and medical equipment. It is an effective way to optimize our natural resources and improve customer value.

Speaker:

Jackie Earle has been with Caterpillar Inc. for over 27 years, after receiving her BS degree from the University of Pittsburgh. She spent most of her early career providing metallurgical support for engine design engineers, making material & process recommendations, leading supplier quality projects and providing powdered metal expertise.

Jackie also earned a MS degree in Mechanical Engineering from Bradley University, and progressed through lead engineer positions in aftertreatment and engine application groups. She worked in the Electric Power Division, certified as a 6 Sigma Black Belt, and managed product support projects with Joint Venture partners.

Jackie is currently in the Remanufacturing, Components & Work Tools Division of Caterpillar, managing technical support. Her division remanufactures engines, hydraulics, drivetrain and electronic components. Jackie leads efforts to resolve customer problems and improve products, create and conduct training on customer focus, problem resolution and influence purchase decisions.

Jackie's ASM career began at Pitt, and she has held various roles in the Peoria Chapter. She has started the first student Materials Camp in 2005. Jackie has also served ASM members at the national level, on Membership, US Chapter Council and Volunteerism Committees. Jackie also supports student outreach programs, to influence students to enter math & science careers. She led workshops for the "Expanding Your Horizons" programs, to teach Materials Engineering to middle school girls. Jackie also served as a guest speaker and project mentor for the "Project Lead The Way" high school programs.