



Milwaukee Section Newsletter

January 2010

www.milwaukee.sae.org

Hayes Brakes



**Mequon, WI
Wednesday January 20, 2010**



Keynotes:

History

**Product Design Processes
& New Technology**

Test Lab Tour

About Hayes Brakes – HB Performance Systems Inc will kick off 2010 by hosting the Milwaukee SAE Section Meeting on January 20th. HB was formerly known as HAYES BRAKES. Since a management buy out in 2005, much has changed at this business now aptly named HB Performance System Inc. Come and join us for the evening which will include a presentation on some of their latest products, a tour of their product test and validation laboratory, and their LEAN Manufacturing cells. HB is known for their disc brakes which are applied on vehicles ranging from High-End Mountain Bicycles to Military Trucks in use today in the Far East. HB is also known locally for their long standing relationship as a brake system, clutch, and accessory supplier to Harley-Davidson. HB specializes in providing Filled and Bled systems that are ready to install on many vehicles including: motor cycles, snowmobiles, and ATVs. While Power Sports is their core and their passion, The HAYES Bicycle Group is key element of the new business strategy. This group represents Manitou Suspension, Answer handle bars, Sun Ringle wheel systems, and Wheel Smith spokes. For more information about HB Performance Systems see their websites at www.hbpsi.com and www.hayesbicycle.com

Biography:

Adam Fink - History

As an Account Manager, Adam is responsible for a variety of our accounts that make product for the Powersports Industry. He manages Polaris, Arctic Cat, Bombardier Recreational Products, and Kymco along with a variety of other small accounts. His key responsibilities include serving as the voice of the customer, insuring all quality metrics are at acceptable levels, developing sales forecasts for each customer, overseeing the commercial aspects for any new product development programs, managing pricing and margins, and prospecting new customers or new opportunities within the existing customer base.

Adam started with HB part-time as an Engineering Intern while finishing up his studies and then was hired on full-time as a Design Engineer. After only a short time, he was asked to take on an exciting role as the resident engineer for HB at Harley-Davidson's Product Development Center. There he worked directly with H-D engineering along with a multitude of other groups to support both current production and help launch a new brake system in June of 2007.

Adam has a BS in Mechanical Engineering from the University of Wisconsin-Milwaukee.

Ryan Janscha – Product Design Process & New Technology

As a Lead Systems Engineer at HB, Ryan is responsible for vehicle level brake system dynamics, analysis, and NEW product design utilizing PRO-E and other analytical tools. Ryan's product scope includes complete filled and bled brake systems, brake master cylinders, calipers, proportioning valves, hydraulic and mechanical clutch activation, as well as internal components primarily for our Motorcycle customers.

Prior to joining the HB team, Ryan served as Senior Design Engineer with Milsco Manufacturing Inc., focused on integrated suspension / seat assemblies and international manufacturing development.

Ryan has a BS in Mechanical Engineering from UW Madison. He returned more recently to complete Mandarin Chinese language study.

Wes Pederson – Test Lab Tour

As a Test Engineer at HB, Wes is responsible for product performance and validation of current and new Power Sports product families. This includes planning and assembly of prototype samples and components. He also provides technical support to our manufacturing and quality departments for any issues that would arise, that required off-line evaluation. Tasks and skills associated with this role include writing and utilization of data acquisition software, expertise with various electronic sensors and gages, fixture design, performance specifications, and continuously improving methods and practices.

Prior to HB, he held engineering roles at STRATTEC Security Corp. working on a variety of engineering teams ranging from developing inspection instruction for zinc die cast parts to new product development. Key activities included product testing, rapid prototyping, test fixture design, as well as variety of manufacturing processes.

Wes has a BS in Mechanical Engineering from Marquette University.

--- EVENT AGENDA ---

Tour:	5:00pm
Registration:	6:15:00pm
Dinner:	6:30pm
Program:	7:00 - 8:00pm

--- DINNER ---

DINNER PRICES:	
SAE Members / spouses:	\$20.00
Retirees:	\$15.00
Guests / Non-members:	\$25.00
SAE Students w/ID	\$10.00

--- MENU ---

- **Catering by Mama-Mia's - Port Washington**

Italian sausage sandwiches, Italian dessert and other salads, garnish, complementary beverages.

Registration:

Only pre-payments made with a **charge card** can be completed online via <http://milwaukee.sae.org>

Retirees, students and members without web access may register by phone on the SAE Registration Coordinator – Jim Ryan (262) 636-1634. Note registration number!

[Registration deadline: Monday, January 18, 12:00 p.m.](#)

Directions to HB Performance

**HB Performance Systems
5800 W Donges Bay Road
Mequon, WI 53092**

From I-43

Exit 85

West on Mequon Rd/Hwy 57/Hwy 167 about 4 miles to a large intersection. Sign indicates that Hwy 57 turns south. Turn left (south) at this intersection onto Hwy 57/Cedarburg Rd. Go about 1 mile to Donges Bay Rd. Turn right (west) on Donges Bay Road. Go a few blocks. Cross railroad tracks. Next right turn driveway leads to the shipping/receiving area. Second right turn driveway leads to the Bicycle Group and main lobby entrance. The main lobby entrance is near the back of the building near the flag pole. Look for a 2-story glass enclosure with a pyramid on the top.

From I-45

East on Mequon Rd/Hwy 167/Hwy 181. Large intersection with sign indicating Hwy 181 turns south. Turn right (south) on Hwy 181/Wauwatosa Road. Go about 1 mile to Donges Bay Rd. Turn left (east) on Donges Bay Rd. Go about 1 mile. HB Performance Systems is on your left. First left turn leads to Bicycle Group and main lobby entrance. The main lobby entrance is near the back of the building near the flag pole. Look for a 2-story glass enclosure with a pyramid on the top. Second left turn leads to the shipping/receiving area.

Future SAE-Milwaukee Programs:

February 16th Friction Stir Link (held in Waukesha)

Presenters: Bruce Halverson – Marinette Marine Corp., John Hinrichs – Friction Stir Link, Inc. East.

The United States Navy's Littoral Combat Ships (LCS's) represent a new direction in military capabilities and ship design. The lessons learned in friction stir welding of the deckhouse and superstructure extruded 5XXX series aluminum panels of the USS LCS#1 and USS Fort Worth LCS#3 will be discussed. Cost reduction ideas such as friction stir weld classifications, proposed inspection of friction stir welds classes to produce lower cost panels and friction stir processing to produce lower cost stiffeners will be presented. The actual experiences with friction stir welding of LCS#1 and LCS#3 deckhouse and superstructure panels have resulted in ideas and concepts to improve the affordability of future LCS and other aluminum ship structures. Discussions of NDT methods as applied to Friction Stir Welding will also be covered.

(& Monolith Engines, Inc. Tom Dougherty – Pres.

Tom's presentation will be on the design and development of new patented method of energy transfer in engines, pumps and compressors. The Monolith Engine is unique in the way it transfers power from the newly designed piston heads through the piston rods to the dual crankshafts. With this type of transfer, the pistons travel straight up and down significantly reducing friction. Thinking "outside the cylinder" was the way to accomplish these goals. This design should be able to reduce larger engines dramatically in both is size and weight.

March 15th-20th Clean Snowmobile Challenge

The SAE International Clean Snowmobile Challenge (CSC) is an engineering design competition for college and university student members that challenge engineering students to reengineer an existing snowmobile to reduce emissions and noise. Their modified snowmobiles will compete in a variety of events including: emissions, noise, fuel economy/endurance, acceleration, handling, static display, cold start and design.

Member Testimonial:

Kurt Person – Hayes Brakes Performance Systems
Chief Technical Officer and Vice President of Product Development

When the Clean Snowmobile Challenge (CSC) came to Michigan Tech University – Keweenaw Research Center in 2003, MTU/KRC Director and Organizer Jay Meldrum contacted Kurt Person – now HB Performance Systems Chief Technical Officer and Vice President of Product Development for help. Since then, he has supported the event every year in one or more of the following roles. Design paper judge, oral presentation judge, special awards judge, subjective ride and handling judge, and corporate sponsor. "As an active SAE member for more than 20 years I have attended and participated in numerous SAE Events. CSC is by far my favorite event in terms of hands on involvement, student attitudes, student/graduate recruiting opportunities, competitive innovation, and location! As a long-time avid snowmobiler this is also usually my last ride of the season, typically on excellent trail and snow conditions in the spectacular Keweenaw Peninsula of Michigan's Upper Peninsula".

Please consider joining us. We're confident that you'll be glad that you did!

Milwaukee Section 2010-2011 Governing Board

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Dear Members and Section Friends,

I invite you “slow things down” after a busy Holiday season by attending the January HB Performance (HB) section meeting. I would like to thank Kurt Person of HB, a recent transfer member of the Detroit section, for his enthusiasm in hosting this meeting. It’s this support from local companies which helps make our section meetings a success!

This year’s joint-November meeting with ASME was also a huge success! The hybrid vehicle presentation drew 120 attendees who provided new conversation and networking possibilities. SAE will attempt to hold an annual joint meeting with ASME to continue the relationship.

Don’t miss February’s meeting at Friction Stir Link to see the latest technology in military ship manufacturing. These techniques were used on the Littoral Combat Ship (LCS) Freedom commissioned in Milwaukee, earlier in 2009.

Note the March 15th-20th dates for the Clean Snowmobile challenge. There will also be a Milwaukee Section meeting during the event. We hope to see you there.

The May Family Night meeting will be geared toward a race theme, held at Hiller Ford, Inc. We ask any members who are racing enthusiasts to share their projects and experiences with the Section by presenting them at this meeting. Please contact Dale Wiza, if you would like to bring a vehicle to the meeting.

I wish you all the best in the new year!

Regards,

Jim Ryan
Chairman – Milwaukee Section



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