#0409

SCHENCK
Balancing & Diagnostic Systems

balancing news

Information for the quality and performance of rotating equipment - From the Schenck Balancing & Diagnostic Systems Group

Schenck Secure Network with CAB920

Cameron Compression Systems
Article by: Joseph Palazzolo

Challenge

Cameron Compression Systems, a leading provider of flow equipment products to the oil, gas and process industries, recently re-evaluated their existing balancing processes and upgraded their entire rotor balancing facility with new Schenck balancing machines. The potential of safe sharing of the balancing data within work cells, and between multiple machines as well as within the engineering and quality control teams was a priority. This sharing of data also needed to be secure to meet their company's network security specifications, as well as protecting each balancing machine instrument. Schenck Trebel Corporation identified the situation and the potential benefits and proposed their Schenck Secure Network as an approach for safe and secure network sharing and backup of balancing data.

Solution

The Schenck Secure Network for the CAB 920 instrumentation allows Cameron Compression Systems to use all of their CAB 920 instruments in a networkable environment while protecting the CAB 920 instruments, the data stored, and their company network. The balancing results and rotor files can be shared with other machines and with network users for evaluation and data back up. Through the Schenck Secure Network option, the CAB 920's balancing data, reports, and rotor files can be accessed from network PCs, while keeping the CAB 920s isolated from the network and free of adware, third party software and potential internet viruses. Additionally, the system will allow Schenck support staff to remotely access each CAB 920 safely for such purposes as configuration upgrades, on-line operator training, and troubleshooting. This can eliminate the expense of many on-site service calls for upgrades and additional operator training.

Cameron Compression Systems has seen the time and cost saving advantages of the system. They are able to provide centralized, redundant data storage and back up of rotor files and balancing results. Making the information easy to view and share.

Engineering and Quality personnel can view and access the stored data for evaluation without disrupting the balancing process. Theresa Clemons, Process Engineer for Cameron Compression Systems in Buffalo,

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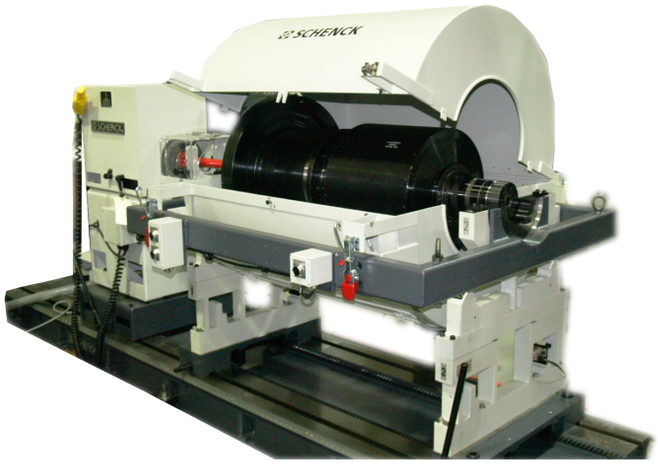
Certification of PMI Rotors

Schenck offers new services for the Jet Engine Overhaul Industries

Article by: Jan Dittmar

New from Schenck

Schenck is proud to offer Certification of PMI Rotor Simulators to the Jet Engine Overhaul Industry. These simulators are considered gage standards that require certification. Annual certification is required for tooling audits, and should be conducted by an authorized source, preferably the OEM of the tool.



Additional Information

PMI stands for Polar Moment of Inertia. A PMI rotor simulator is tooling that, as the name suggests, simulates the mass, moment of inertia, and center of gravity of the flight part. PMI rotor simulators are typically used in a three-step process including initial balancing, blade-tip grinding, and final balancing.

Many engine designs do not employ a bearing between the High Pressure Compressor and High Pressure Turbine rotors. Since each half includes only one bearing journal, the core engine must be balanced as an assembly. Without a suitable bearing journal between the halves of the assembly, a mating half of the core engine assembly is required to provide the other bearing journal.

During initial manufacture, the core engine assembly is typically balanced using original flight parts. However, maintenance requirements incorporating different Mean Time Between Overhaul for High Pressure Compressor and High Pressure Turbine assemblies often limits availability of a complete core engine assembly. Therefore, PMI rotor simulators are required to provide the necessary bearing journal, while closely simulating the physical properties of the substituted flight part. Our PMI rotor simulators are configured for use with blade-tip grinders, so no additional tools are required to interface the PMI Rotor to the blade-tip grinder. This reduces tooling, simplifies the process, and saves significant assembly and disassembly time during overhaul.

As the OEM of the balancing tooling, Schenck is uniquely qualified to certify the PMI rotor simulators. Our services include inspection of the PMI rotor simulators for any damage and wear, balancing at our in-house Balancing Service Center, and certification of the rotor simulator set, with comprehensive documentation detailing the process. As part of our Schenck Educational Services, we also offer a one-day “Balancing with PMI Rotors” workshop, focusing on the correct method of balancing using PMI rotor simulators.

For more information on PMI Rotors, or for current rates on Certification, contact Sales@Schenck-usa.com.

New Product Showcase

New WME3 / ESF for Propeller Balancing

Introduction by: Michael Schonfeld

Regional Airlines and others flying fuel-saving turboprop shuttle aircraft now have access to a cost-effective, multi-function machine supporting maintenance and overhaul of prop blades and complete assemblies.

The Schenck Model WME3 / ESF static balancing machine is a new design capable of precision measurements including:

- Measuring total weight
- Locating center of gravity
- Single-axis moment weighing of blades
- Biaxial Moment Weighing of blades (supporting variable pitch applications)
- Static balancing complete prop assemblies.

The WME3 / ESF is also suitable for many helicopter tail rotor applications.
Contact Sales@Schenck-usa.com for more information.

Schenck Secure Network with CAB920
(Continued)

NY said, "*We are very happy with the ability to search for old balancing records in the machines from our computers without having to interrupt operation on the floor. We have used this feature to confirm results of recent balance runs where before we would have had to search the shop floor for the printed paperwork....and now we have instant access.*"

Schenck remotely added an instrumentation software option by securely accessing the CAB 920 through the Schenck Secure Network Server. The session was initiated by Cameron and allowed Schenck Service to enter the instrument configuration and make the upgrades requested. Once the installation was complete, the newly installed option was remotely demonstrated to the operator, the session was terminated, and the balancing machine was back in service, with the newly installed option in use.

"*The ability for Schenck to remotely connect to our balance machine for technical support or uploading software was a pleasant surprise. I am particularly satisfied with the opportunity for someone from Schenck to train us on new software over the phone, at our computers, rather than scheduling an in-shop visit.*"

Within a short period of time, the entire procedure was completed remotely, and did not require the time and expense of an on-site visit.

Result

Schenck's Secure Network has provided secure access and sharing of rotor balancing data and files, as well as back up data storage and remote access by Schenck Service for training and upgrading, all without compromising Cameron's company network security specifications and allowing Schenck's CAB 920 instrument to provide top-of-the-line performance and reliability.

Cameron Compressor has saved time and money by utilizing the network option for their Schenck balancing machines. "*We are certain that we have not fully utilized the potential of these new capabilities, but we are working towards it!*" Their newly completed overhaul of their balancing shop has been complimented by the network system and it allows Cameron to get the most out of their investment and help maintain a quality balancing facility; resulting in quality products.

Schenck Secure Network

For more information on Schenck's New Secure Network, contact Sales@Schenck-usa.com

Order from Schenck Online!

Schenck's New Innovative eSales Portal*

Did you know that ordering your new balancing machine was just a mouse-click away?

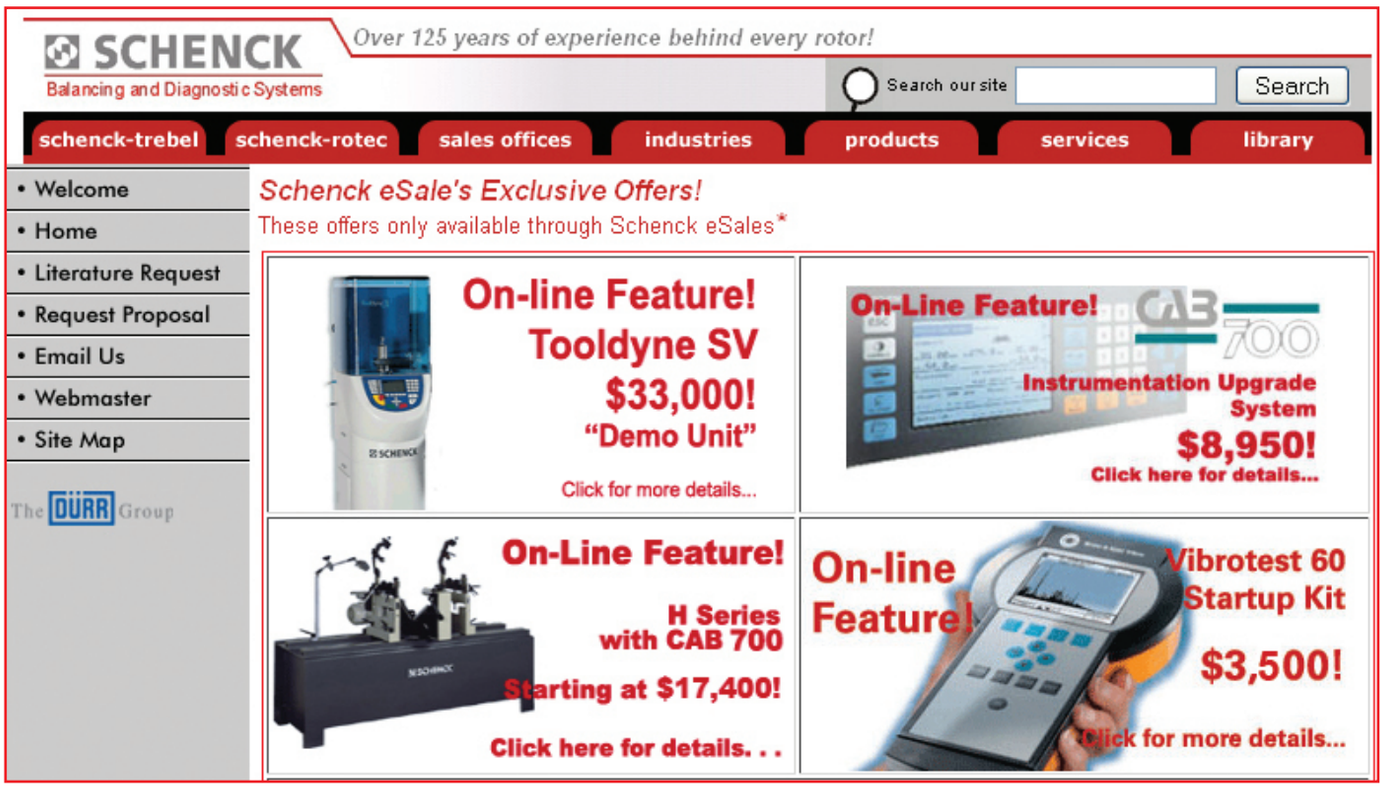
Look for the eSales Portal at
www.schenck-usa.com/index.asp

New to www.Schenck-USA.com is an exciting feature we like to call the eSales Portal. Now purchasing balancing machines, condition monitors and instrumentation is as simple as clicking your mouse on any one of our Featured Offers.

Once you've selected the offer that compliments your application, simply fill out a brief form and your order is on the way, or if you are unsure how the featured offer can optimize your application, Schenck can easily send you additional information.

This solidifies our leadership position in the industry by not only innovating new products but presenting a pleasant online ordering experience.

Schenck has been the leading supplier of dynamic balancing equipment for over 100 years. Our complete line of universal and specialized balancing machines provides accurate, dependable operation and assures quality performance for rotors weighing a fraction of a gram to the largest steam turbines in the world. Even if one of the Featured Offers does not suit your application, Schenck will assist you in finding the perfect solution. *Just click!*



A sample of eSale's Exclusive Online Offers. Visit http://www.schenck-usa.com/esales.html to view all eSales has to offer!

*eSales received the 2008 Heinz Dürr Award for Innovation

Lowering Manufacturing Costs While Increasing Customer Satisfaction

Job Well Done, Buffalo Forge de Mexico

Article by: C.J. Horan
Commercial Anfra, S.A. de C.V.

With the addition of the Schenck H60/CAB 920 balancing machine, Buffalo Forge de Mexico not only increased their balancing capacity, but lowered their manufacturing costs and production time. This resulted in greater customer satisfaction.

In a letter from the General Manager of the Centrifugal Fan Group in the United States, the team at Buffalo Forge were congratulated on a "Job Well Done" in a recent balancing and installation of a 23,850 lb Force Draft Fan for a customer.

The installation engineer had recorded vibration levels of 0.01-0.02 in/sec vibration, in all planes, at full running speed. He also reported:

"The fan ran so smooth, that the customer could not believe that it was rotating."

Calculations prepared by Balancing Supervisor Andres Ibarra showed they had balanced the rotor to under ISO G1.0, at 120RPM. Typically their normal tolerance was ISO G2.5.

Not only were they acquiring better results than before, but according to Manufacturing Engineer Oscar Barbosa, with their new Schenck machine Buffalo Forge had cut balancing time down by a factor of 70%. "It used to take us two or three days to balance a rotor like this, and now we can do it in less than a days work. Best is, it usually only takes us two or three runs to put it into tolerance, and we usually balance everything between 110 to 150 RPM."

When David Smith (VP Manufacturing Howden Buffalow Inc.) and Enrique Hernandez (General Manager, BFSA) approached Schenck about a project involving a 20 ton machine they were equally impressed at how easily Schenck could help to satisfy Buffalo Forge's customers even more. Part of their request was to see if they could move away from using an end drive, and use a belt drive instead to eliminate drive shaft errors lower the balancing time and costs, as well as achieve better higher sensitivities.

Joe Alberto, head of the Universal Applications Department at Schenck Trebel knew it could be done with the CAB 920 Instrumentation at low speeds. "Of course, we told the customer that getting such a large rotor, with large inertia, up to speed would

take longer then we normally would see when using an end drive, 5 minutes compared to 1-2, as well as the increase breaking time. But if they didn't mind the wait, we could accommodate them."

"Buffalo Forge placed the order with us in the beginning of 2007, with a strict delivery time, and we were able to meet their schedule. When we went to install the new machine, the only rotor available at the time was a whooper; an 18 ton, 120 inch diameter monster" says Cecilia Horan, from Comercial Anfra.

"Three runs later, it was balanced."

The balancing personnel could not believe it. Before it would have taken them three runs just to calibrate, and that was after balancing it statically on rollers just so they could spin it up to 250 RPM without having to worry if it was going to jump out of the machine. They were also impressed that by using the Schenck machine, they did not have to seal up the rotor to prevent windage problems which created, yet more unexpected savings in time and money.

Any time you can satisfy your customer while saving time and money, you truly deserve a Job Well Done!

Congratulations from Comercial Anfra and Schenck Trebel to everyone at Buffalo Forge!

New Product Showcase

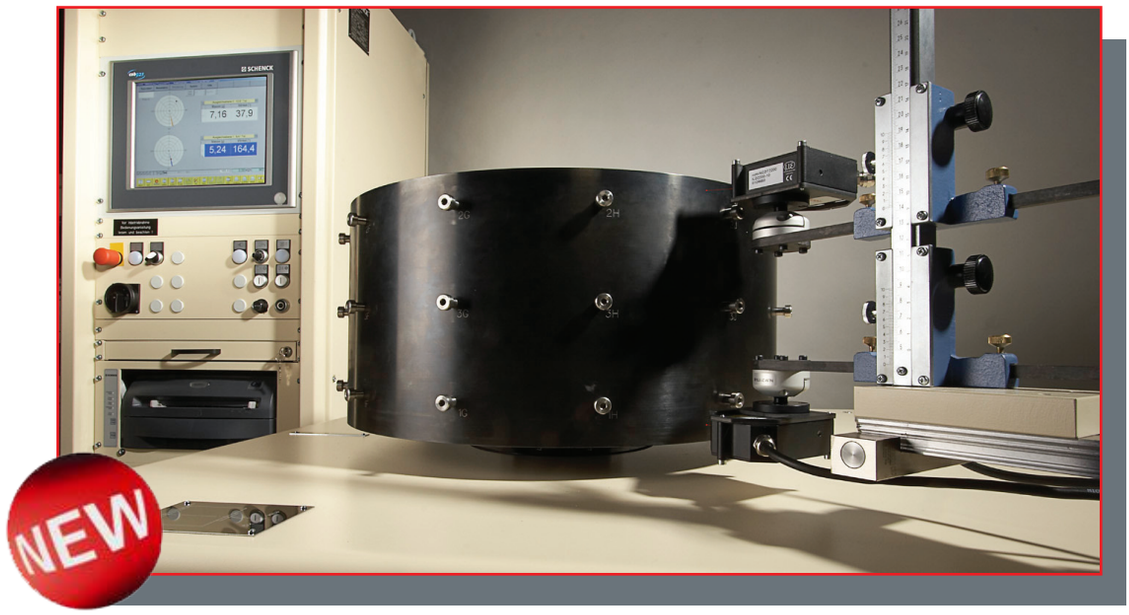
New Laser Eccentricity Measurement System

Introduction by: Michael Schonfeld

Schenck recently introduced a new laser eccentricity measurement system for two-plane vertical dynamic balancing machines. Precision laser probes measure eccentricity and correct alignment issues resulting from assembly error and tooling fit.

Using our new Laser Eccentricity Measurement System, you can:

- Reduce internal bending moments, saving costly time in Engine Test Cell
- Build alignment into multi-component rotor stacks
- Ensure clearance between rotor and stator segments
- Eliminate Index Balancing procedure from your process.



For more information on how the new Laser Eccentricity Measurement System can assist in your application, contact Sales@Schenck-usa.com.

trade show info

Show	Dates	Schenck Booth #
EASA St. Louis, MO	June 14th - 16th	525
Turbomachinery Symposium Houston,TX	September 14th - 16th	930
NBAA Orlando, FL	October 20th - 22nd	5486
Power Gen International Las Vegas, NV	December 8th - 10th	C1-340

upcoming seminars

Course	Date	Location
Fundamentals of Balancing	June 2nd - 4th	Auburn Hills, MI
Certification Level 1 Exam	June 4th	Auburn Hills, MI
Balancing Workshop IV	June 26th	Chicago, IL
Balancing Workshop V	July 10th	Houston,TX
Balancing Theory & Application	July 14th - 16th	Deer Park, NY
Certification Exam Levels 1 & 2	July 16th	Deer Park, NY
Balancing Workshop IV	July 24th	Santa Ana, CA
Balancing Workshop V	July 31st	Chicago, IL
Balancing Workshop VII	August 14th	Deer Park, NY
Fundamentals of Balancing	August 25th - 27th	Deer Park, NY
Certification Level 1 Exam	August 27th	Deer Park, NY
Balancing Workshop VI	September 4th	Houston,TX
Balancing Workshop V	September 11th	Santa Ana, CA
Balancing Workshop VI	September 25th	Chicago, IL
Balancing Workshop I	October 2nd	Houston,TX
Balancing Workshop I	October 9th	Chicago, IL
Balancing Workshop VI	October 16th	Santa Ana, CA
Advanced Jet Engine Balancing	October 27th - 29th	Deer Park

For more information on Trade Shows and Seminars, or to register for a Seminar, visit www.schenck-usa.com