

FTI Technical Achievement Awards

Class of 2008

Fastener Technology International proudly presents the fourth annual **FTI Technical Achievement Awards, Class of 2008:**

William D. Unferth, Joe Greenslade, Russell G. Sherman and Dr. Sumanjit Singh. Congratulations to all four of this year's winners.

William D. Unferth

Nominated for his development and creation of *Lindstrom Technical Manual*, **William D. Unferth** is Special Projects Manager at **Lindstrom Fastener Group**, Blaine, MN, USA.

Bill Unferth's career of nearly 50 years began in 1961 at **Cleveland Cap Screw Company**, Cleveland, OH, USA, where until 1966 he worked as a Salesman responsible for all outside sales activities in the USA states of North Carolina, South Carolina and Virginia. Focused on selling all types of threaded fasteners to the distribution and end user markets, sales in his territory grew by some 70%.

For the next 10 years, Unferth held the position of Vice President at **Universal Fastener Company** in Charlotte, NC, USA, where he continued selling threaded fasteners to end users at both the OEM and MRO levels in North Carolina, South Carolina and Virginia. At Universal Fastener Company, Unferth was also responsible for inside sales activities and some branch activity. During his time at the company, sales grew by about 200%.

From 1976 to 1981, Bill Unferth was Regional Manager responsible for 15 southeastern and southwestern USA states including two District Managers for **Holo-Krome**, West Hartford, CT, USA. At Holo-Krome, Unferth increased sales in his 15 states by 100%.

The next stop for Bill was **Metric American Fasteners**, Greenville, SC, USA, where from 1982 to 1983, he was Vice President. During just one year, Unferth took a business with no distributor



William
D. Unferth



Lindstrom
Technical Manual

business and only about US\$400,000 in other sales, and transformed it into a company selling US\$1.2 million in metric fasteners to distributors. His role at Metric American Fasteners was customer as well as supplier-related. In 1983, Unferth was instrumental in the sale of Metric American Fasteners to **Bossard International, Inc.**, now known as **Bossard Metrics, Incorporated**, Portsmouth, NH, USA.

As Vice President Sales and Marketing at Bossard Metrics from 1983 to 2001, Bill Unferth provided support to national catalog accounts such as **McMaster-Carr Supply** with regard to stocking new metric products. He developed all formulas for selling new products and created all data to establish list prices for all Bossard catalogs since 1984. All Bossard Service Centers reported to Unferth at one time or another. He also supported the service centers in their sales efforts to national accounts such as **Bowman Products**; **RB & W**, now known as **Supply Technologies**; **Questron**, now known as **Gexpro**; and **Lawson Products**. Unferth handled

all national trade shows for Bossard as well as attended all **National Fastener Distributor Association (NFDA)** meetings as voting member of Bossard. Unferth served as Associate Chairman for NFDA during 1992-1993. Since joining the company, Unferth was instrumental in growing the company's sales by approximately 900%.

As Vice President Sales from 2001 to the present, and currently as Special Projects Manager, William D. Unferth has provided support in developing the Lindstrom Fastener Group's national Rep organization. At Lindstrom

Fastener, Unferth has also worked with major catalog houses such as McMaster-Carr Supply and **Grainger** in order to bring new metric products into their product offerings, both from the sales side as well as the technical side. Unferth has developed sales and marketing data at Lindstrom to more effectively monitor and grow the company's sales. He has also been instrumental in bringing a new stainless steel program on-line at Lindstrom both from a sales as well as technical side.

www.lindfastgrp.com

Joe Greenslade

Nominated for his dedication to standards development and quality in the global fastener industry, **Joe Greenslade**, Director of Engineering Technology, at the **Industrial Fasteners Institute (IFI)**, Independence, OH, USA, has been active in the fastener industry since 1970. He has held positions with major fastener producers in sales engineering, marketing, product design, manufacturing management and research and development management.

Prior to his appointment as IFI Executive Director, Greenslade was the owner and President of **Greenslade & Company, Inc.**, Fort Worth, TX, USA, a designer and manufacturer of special and industry-specific dimensional measuring devices and *ISO 17025* Calibration Laboratory accredited by the **American Association for Laboratory Accreditation (A2LA)**.

Joe Greenslade holds 12 U.S. patents on various fastener-related products and has authored over 200 trade journal articles on fastener applications, manufacturing and quality issues. He is one of the fastener industry's most frequent speakers at trade association meetings and conferences. He is the youngest person ever inducted to the Fastener Industry Hall of Fame.

Through his career and in addition to the IFI, Greenslade has been active in many fas-

tener industry associations and societies including the **American Society of Mechanical Engineers** (B1.1 Screw Thread Standards Subcommittee, B1.2 Screw Thread Gaging Subcommittee, B1.3 Thread Acceptability Subcommittee and B18



Joe Greenslade

Fastener Standards Subcommittees); **American Materials and Testing Society** (F16 Fastener Testing Subcommittee); **Society of Automotive Engineers** (Ship Systems & Equipment Fastener Subcommittee); A2AL; **American Measuring Tool Manufacturers Association**; and **National Fastener Distributor Association**.

Greenslade was also a member of the **Fastener Quality Act Public Law Task Force** and a member of the **Screw Thread Conformance Task Force (STC-TF)** for the revision of aerospace thread design and thread gaging practices for the **Federal Aviation Administration (FAA)** and the **Department of Defense (DOD)**.

Joe Greenslade has also worked as a consultant with fastener suppliers and end users on product design, applications engineering, fastener failure investigation, special gage design and other quality issues. He has also served as an Expert Witness in litigation involving fastener related issues. www.indfast.org

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Russell G. Sherman

Russell G. Sherman, PE, has been nominated for his many accomplishments in the fasteners industry such as his development of the thermo-mechanical treatment process used in the manufacture of bolts. With a B.S. (Metallurgical Engineering) from the **University of Pennsylvania**, Sherman's areas of expertise include industrial metallurgical processing of aerospace and commercial alloys, especially fasteners. He is experienced in material and process selection for optimum properties and failure analysis of aerospace components and materials.

Russell G. Sherman began his career in 1953 as a Research Metallurgist at **Titanium Metals Corp.**, Henderson, NV, USA. Sherman's first experience in the fastener field was from 1956 to 1960 at **Allen Mfg. Co.**, Hartford, CT, USA, as Chief Metallurgist.

Sherman later joined **Voi Shan**, Culver City, CA, USA (now a division of Alcoa) as Chief Metallurgist. This was in 1960, just as the aerospace industry was creating a demand for higher-quality, higher-strength fasteners and fasteners from exotic materials for missiles and space exploration. Sherman directed the efforts at Voi Shan to produce fasteners from single-crystal tungsten, molybdenum alloys, titanium, columbium and titanium.

It was also during this time that Russell Sherman developed the thermo-mechanical treatment used to produce 200 ksi bolts from the normal 130 ksi alloy, A286. This bolt product then became a standard covered by aircraft and military specifications.

He also developed the warm rolling (expanded lead dies) needed to thread roll high strength steel fasteners from H-11 tool steel.

Later, as Engineering VP of **Valley Todeco**, he used the thermo-mechanical process to produce 220 ksi Inc 718 bolts used to hold the RR engines

Russell G. Sherman,
developer of the
thermo-mechanical
treatment process
used in producing bolts.



on the Lockheed 1011. This product became an industry standard and replaced all H-11 220 ksi bolts in the aerospace industry.

Russell also developed the mass production method for producing the titanium fasteners for the 747 wing. Another development was the production of 1- $\frac{3}{4}$ " 260 ksi maraging steel bolts for the landing gear of the 747. Additionally, he patented the interference fit fastener, Sine-Lok, that was used in all USA jet engines.

After becoming an independent consultant he consulted for Automotive Racing Products. That company became the premier fastener manufacturer for the racing industry. He received a patent for a method of cold heading 260 ksi MP 35 fasteners.

From 1973 to the present, Russell G. Sherman has been Vice President of **NETCO**, located in Santa Monica, CA, USA.

Additional patents held by Russell G. Sherman include Heat Treating Titanium-Base Alloy Products and a Titanium Alloy System.

Professional memberships and registrations include Professional Engineer, Metallurgical, California; Past Chairman, Los Angeles Chapter, **ASM International**; Past Chairman, Southern California Section, **Metals Society-AIME**; Member, **Independent Metallurgical Engineering Consultants of California**—Chairman 1979-1981. Russell G. Sherman also holds the title of Fellow, ASM International.

www.metallurgist.net

Dr. Sumanjit Singh

Nominated for his development of form-fit FF[®] blind rivet and lock bolt technology, **Dr. Sumanjit Singh** has worked as a free-lance Engineering Consultant since his retirement in 2001 as **Audi's**, R&D Department Head of Joining Technology.

The basic idea behind the development of the form-fit FF blind rivet is to bridge the gap between shank and workpiece through radial expansion of the shank using a splined mandrel. The circumscribing diameter of the splined portion is larger than the inner diameter of the shank. When the mandrel is drawn into the shank, it experiences radial expansion, its outer wall making contact with the walls of the workpiece bore, after which the "surplus" material of the shank flows into the spaces between adjacent splines ensuring form-fit between both workpieces and shank as well as between shank and mandrel.

In a similar manner, the new lock bolts have a splined mandrel, the circumscribing diameter of the splined portion being larger than the hole/bore diameter in the workpieces. As the lock

Dr. Sumanjit Singh,
the developer of
form-fit (FF) blind
rivet and lock nut
technology.

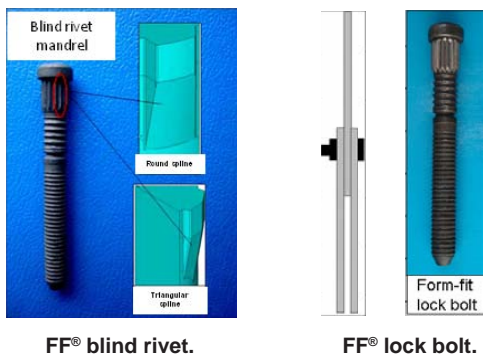


bolt is drawn through the workpiece, the surplus material of the workpieces is forced to flow into the "valleys" between adjacent splines.

With both the FF blind rivet and the FF lock bolt, the joints are form-fit as well as force-fit. The load carrying behavior of these joints is far superior to that of joints made using state-of-the-art blind rivets and lock bolts. This is especially so in the case of alternating cyclic loads.

Advantages of FF blind rivets and lock bolts include form and force-fit joints even without precision reamed holes, form and force-fit joints even if hole diameters are different, fasteners with smaller diameters can offer equal or even better load carrying capability than state of the art fasteners, joints are suitable for transmitting alternating cyclic loads with large amplitudes, fatigue life of joints is up to 106 times longer, static yield strength is up to six times higher and currently used setting equipment can be used.

Dr. Sumanjit Singh studied mechanical engineering at **Aachen University** in Germany, specializing in production engineering. He also received his PhD in resistance welding from Aachen University. sumanjit.singh@t-online.de



FTI Technical Achievement Awards are given out annually to individuals in the fastener industry that have been responsible for major technical developments related to making, distributing or using fasteners. The awards honor individuals responsible for major practical technical developments that have improved the way fasteners are made, used or how they perform. Award recipients have been selected from nominations made to this magazine. We reviewed each nomination,

consulted outside advisors when necessary and made the final decisions. Also, there is no time limit on when a nominee's technical development was made—it could have been in the last year, several decades ago or anywhere in between. Also, there is not a minimum or maximum number of awards granted each year. The nominations for the *Class of 2009* awards should be submitted by email by November 1, 2009 to mcnulty@fastenertech.com.