M.C. Gill Corporation Group of Companies

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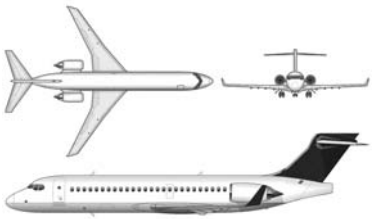
Somethings for *You* to Chew On

Aeroteam Aviation Services Ltd.
Limin Wan, Managing Director (standing),
Jianguo Liu – Director of Sales & Marketing

谨此农历新年之际，我代表MCGill公司向所有的中国客户致以节日的问候，并感谢你们给予了我们参与到你们所从事的飞机维修与制造项目之中的机会，我们再次郑重承诺，我们将以我们更优异的产品和更出色的服务报答用户对我们的信任。祝大家新春快乐！

Since 2001, China has been on a sustained course of economic growth, fueled largely by the aviation and aerospace sectors. According to industry analysts, China is the fastest-growing aviation market in the world, with passenger and air cargo traffic expected to increase by annual rates of 7.6% and 10.3% respectively. As of 2005, there were over 800 domestic jetliners operating in China and this number is expected to more than triple by the year 2023. These projections are not surprising, considering the increasing investment and rapid development that China's aviation industry has seen over the last 20 years

As a leading manufacturer of high performance composite products, M.C. Gill Corporation has realized many new opportunities and challenges within this growing market. As airlines and maintenance facilities continue to expand and diversify their capabilities to offer comprehensive MRO products and services, there has been increased demand for our OEM-qualified cargo linings, floor panels and honeycomb materials. These requirements extend to the various passenger-to-freighter conversion programs currently under long-term licensing agreements. The launch of China's first domestically manufactured regional jet, the ARJ-21, has also driven the introduction of new materials and technologies. These factors, combined with the longstanding business agreements between Chinese manufacturers and OEMs throughout the world, have rendered China a major aerospace market.



CHINA

M.C. Gill Corporation Responds to China's Aviation Needs

In recent years, M.C. Gill Corporation has significantly increased its presence in China. While our participation in this market is considered fundamental to our future growth, we recognize that our potential for success is commensurate with our level of commitment in supporting these customers. This commitment involves identifying our customers' needs and establishing the resources to ensure that these needs are consistently met; a philosophy confirmed by the fact that M.C. Gill Corporation's business in China has nearly doubled in the last three years.

Although this approach may sound elementary, we believe it is important to recognize that the needs of each customer are unique and that these needs tend to change over time to maintain alignment with advancing organizational goals and objectives. This is particularly true in growth markets where companies seek to expand their core business but may lack the benefit of history and experience. Having participated in most major OEM programs over the last 60 years, M.C. Gill Corporation has the knowledge, product qualifications and expertise to offer optimum solutions.

In China, our focus has been to provide strong technical and logistics support, while maintaining superior customer service. This support includes training in all aspects of fabrication: cutting, routing, drilling, insert installation and decompression panel manufacture. With many operators commencing maintenance on their Airbus fleets, this training has helped to ensure that the materials and fabrication used are in accordance with OEM requirements. As airlines and MROs have expanded their maintenance programs, our representatives have worked closely with engineers and planners to identify the appropriate material specifications and to establish initial provisioning quantities. With the recent trend toward "lean" inventory and Just-In-Time delivery, this support has extended to working closely with customers to develop optimum solutions to their logistics needs. Although M.C. Gill Corporation offers some of the shortest lead times in the industry, there are programs where on-site inventory is needed. In these cases, we have established partnerships and alliances to ensure that specific customer needs are met.

Aeroteam Aviation Services Ltd. Partners in China with M.C. Gill Corporation

In 2001, Aeroteam Aviation Services, Ltd. joined M.C. Gill Corporation's team of global representatives, bringing with them over 60 years of combined experience in engineering, materials planning and aircraft maintenance. Our strong alliance has enhanced communication between M.C. Gill Corporation and regional customers, improving our ability to react quickly to technical and commercial issues. The dedicated staff of Aeroteam includes:

WAN Limin – Manager Director
LIU Jianguo – Marketing and Sales Director
LI Di – Marketing and Sales Manager

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CHINA

M.C. Gill Corporation Exhibits at Aviation Expo China 2005

In September 2005, M.C. Gill Corporation exhibited for the first time at Aviation Expo China. The event was held at the China International Exhibition Centre in Beijing and was attended by M.C. Gill Corporation Marketing Manager, Candi Burdick, and co-hosted by Aeroteam Aviation. This air show was supported by the General Administration of the Civil Aviation of China (CAAC) and co-organized by major aerospace manufacturers in China. Attended by 175 exhibitors from 21 different countries, Aviation Expo China is considered an Asian showcase for aerospace manufacturers, operators and maintenance and service providers. “It was a great occasion to meet with customers to further introduce our products and capabilities,” Candi Burdick reported. “While M.C. Gill Corporation and Aeroteam maintain close contact with our customers in China, our participation in this show further demonstrates our appreciation and commitment in supporting China’s growing aviation market.”

(From right to left) Limin Wan, Aeroteam; Candi Burdick, M.C. Gill Corp.; Jianguo Liu, Aeroteam.

SAMPE Honors M.C. Gill

The Society for the Advancement of Material and Process Engineering (SAMPE), Los Angeles Chapter, paid a special tribute in honor of M.C. Gill, founder of the M.C. Gill Corporation. Dr. Clem Hiel, chairman of the Los Angeles Chapter of SAMPE, presented a plaque to M.C. in recognition of his outstanding accomplishments and contributions to the composites industry.

Among those present to honor M.C. Gill were Professor Steven Nutt of the University of Southern California, who holds the Merwyn C. Gill Chair in the USC Composites Center for graduate-level research; Gregg Balko, executive director of the SAMPE International; and John Szary, president of the Southern California Section of the Society of Plastics Engineers (SPE).

Kevlar® Honeycomb Core Qualification for M.C. Gill Corporation

High-performance composite materials have become increasingly vital to the aviation industry since first introduced over 50 years ago. This is especially true today as aircraft manufacturers challenge technology to keep pace with advancing designs. For M.C. Gill Corporation, the introduction of next generation aircraft has necessitated the research and development of products having unprecedented weight and performance characteristics. Our efforts over the past five years have yielded a portfolio of state-of-the-art materials to support contemporary aircraft designs, including the Airbus A380 and Boeing B787. Integral to many of these new products is M.C. Gill Corporation's second-generation aramid honeycomb; Gillcore™ HK.

Gillcore HK is a high-performance honeycomb manufactured using DuPont Kevlar® N636 paper with phenolic resin. As a saturable, para-aramid substrate, N636 becomes a true composite cell wall when converted to honeycomb, offering exceptional shear strength and modulus, stiffness, durability, fatigue and hot/wet properties. Gillcore HK can offer significant weight savings for applications currently utilizing Nomex® based Gillcore HD. This material is also a lower cost alternative to bias weave fiberglass-reinforced honeycomb and Korex®, the predecessor to N636 Kevlar, which was recently discontinued by DuPont.

Gillcore HK has been developed and commercialized in both hexagonal and over-expanded cell configurations. It is available in cell sizes ranging from 1/8˝ (3.2mm) to 3/16˝ (4.8mm) and densities ranging from 2.0 to 10.0pcf (32kg/m3 to 160kg/m3). With typical weight savings potential of 20-40%, Gillcore HK is positioned to become the new standard for composite fuselage structures, flooring and interior panels.

TABLE 1

Test and Unit of Measure	Gillcore™ HK 1032 (1.8mil N636)	Gillcore™ HK 1033 (2.8mil N636)
Cell Size, inch (mm)	0.125 (3.2)	0.125 (3.2)
Density, lb/ft3 (kg/m3)	4.5 (72)	4.5 (72)
Stabilized Compression, psi (N/m2)	931 (6419)	791 (5454)
Bare Compression, psi (N/m2)	827 (5701)	699 (4819)
"L" Plate Shear Strength, psi (N/m2)	465 (3206) 22.2 (153)	619 (4268) 31.4 (217)
"L" Plate Shear Modulus, ksi (GPa)		
"W" Plate Shear Strength, psi (N/m2)	245 (1689)	331 (2282)
"W" Plate Shear Modulus, ksi (GPa)	10.5 (72.4)	12.1 (83)

Gillcore HK Offers Weight Reduction and Design Flexibility

The general rule of honeycomb is that shear properties are driven by the substrate, compression properties are driven by the resin. The replacement of Nomex honeycomb by lower density N636 honeycomb is based on the higher shear strength and modulus inherent to N636 paper. For applications where shear strength and modulus are the critical properties, it is possible to achieve design allowable values that are equal to or higher than existing Nomex values at a significant reduction in core density.

Conversely, if compression strength is the driving property, or is of equal importance to the shear property, the use of a lower density N636 may offer no advantage with respect to weight reduction. This is because the use of lower density N636 core to replace a higher density Nomex core will almost always be accompanied by a reduction in the allowable compression strength.

Because most densities of Gillcore HK can be manufactured using different thicknesses of N636 paper, this product offers a broad range of latitude in design. Within certain parameters, paper thickness can be increased or decreased to achieve the required shear, modulus and compression properties. Recognizing that cost is largely driven by the thickness of N636 paper, this flexibility in configuration allows designers to optimize cost vs. performance to arrive at the most economical solution.
The chart above (Table 1) provides a comparison of Gillcore HK 1/8˝-4.5pcf (3.2mm-72kg/m3) manufactured using 1.8mil (46µm) and 2.8mil (71µm) thick N636 paper.

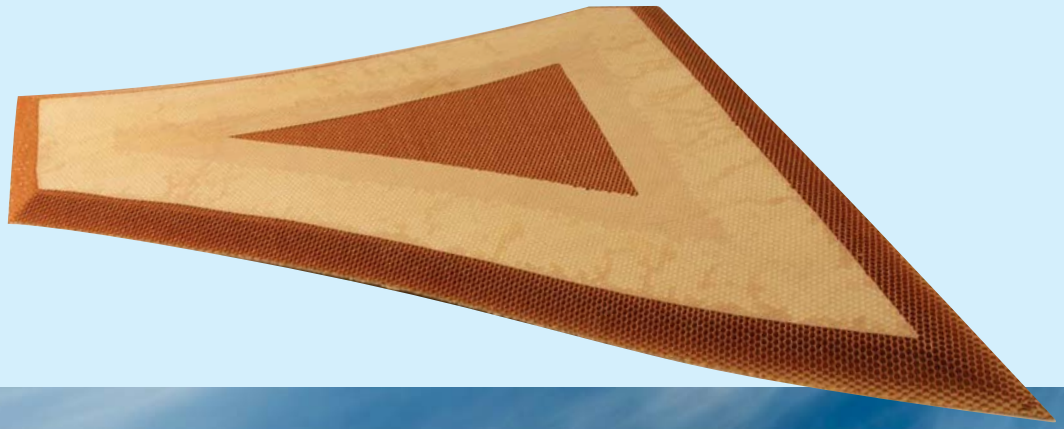
Continued on next page

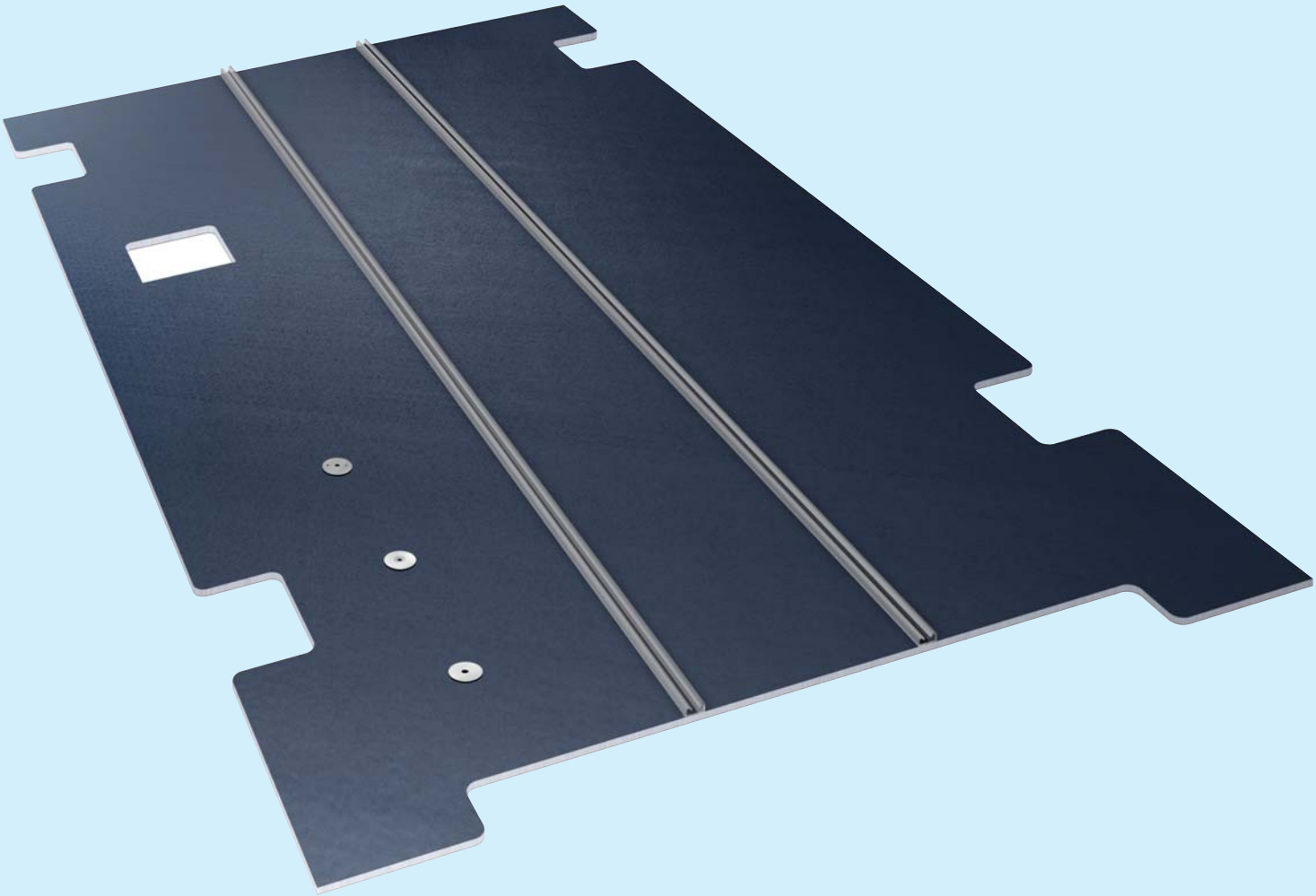
TABLE 2

Original Equipment Manufacturer	Specification	Type	Class	Grade	Configuration	Cell Size – Density
Airbus	AIMS 11-01-004	D	–	–	1/8″ – 2.5pcf	3.2mm – 40kg/m3
Airbus	AIMS 1-01-004	F	–	–	1/8″ – 3.0pcf	3.2mm – 48kg/m3
Airbus	AIMS 11-01-004	W	–	–	5/32″ – 6.0pcf	4.0mm – 96kg/m3
Airbus	AIMS 11-01-004	P	–	–	5./32″ – 4.5pcf	4.0mm – 72kg/m3
Airbus	AIMS 11-01-004	T	–	–	1/8″ – 6.0pcf	3.2mm – 96kg/m3
Bell Helicopter	299-947-386	I	3	A	1/8″ – 3.0pcf	3.2mm – 48kg/m3
Bell Helicopter	299-947-386	I	4.5	A	1/8″ – 4.5pcf	3.2mm – 72kg/m3
Bell Helicopter	299-947-386	I	6	A	1/8″ – 6.0pcf ,	3.2mm – 96kg/m3
Bell Helicopter	299-947-386	1	2	A	3/16″ – 2.0pcf	4.8mm – 32kg/m3
Bell Helicopter	299-947-386	1	3	A	3/16 – 3.0pcf	4.8mm – -48kg/m3
Boeing.	BMS 8-124	V	6	2.5	1/8 – 2.5pcf	3.2mm – 40kg/m3
Boeing.	BMS 8-124	V	6	3.0	1/8 – 3.0pcf	3.2mm – 48kg/m3
Boeing	BMS 8-124	V	6	4.0	1/8 – 4.0pcf	3.2mm – 64kg/m3
Boeing	BMS 8-124	V	6	6.0	1/8 – 6.0pcf	3.2mm – 96kg/m3
Boeing	BMS 8-124	VI	6	2.5	3/16 – 2.5pcf OX	4.8mm – 40kg/m3
Boeing Defense	D210-12012-1	V	6	4.5	1/8 – 4.5pcf	3.2mm – 72kg/m3
Northrop Grumman	ACS-MRS-5301	1/8 4.5	1	–	1/8 – 4.5pcf	3.2mm – 72kg/m3
Northrop Grumman	ACS-MRS-5301	1/8 6.0	1	–	1/8 – 6.0pcf	3.2mm – 96kg/m3

Gillcore HK Qualifications

Since its introduction to the aviation and aerospace markets, N636 Kevlar honeycomb has been specified for extensive use in both commercial and military programs. M.C. Gill Corporation has completed qualifications with the Original Equipment Manufacturers, as shown above in Table 2. Additional qualifications are in process.





Gillcore HK Supports Ultra-Lightweight Sandwich Structures

While Gillcore HK has gained widespread acceptance as a raw material, it has also been incorporated into many of M.C. Gill Corporation's "next generation" sandwich panel designs. By combining our expertise in resins, prepregs and adhesives with lighter density Gillcore HK, we have achieved maximum attainable weight reductions while maintaining superior performance characteristics. Although much of our initial development work has focused on the A380 and B787 floor panel programs, R&D efforts are ongoing and include a new line of interior panels slated for use in galleys, lavatories, bulkheads, partition walls and stowage bins.

As demonstrated by the qualification testing of Gillfab™ 4809 to Boeing specification BMS 4-20 Types VI-IX, our innovative designs have resulted in weight savings per square foot ranging from 8.7% in low-traffic areas to over 28% in galleys and highly loaded areas, compared to current material standards. Our ability to achieve such reductions

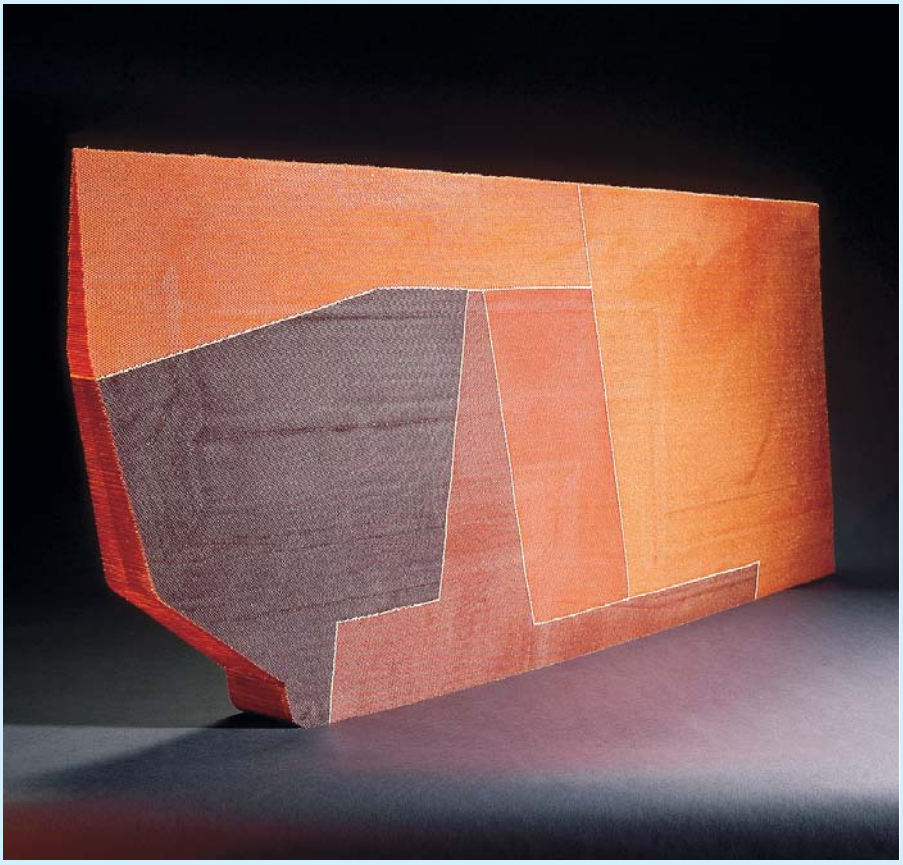
is directly related to our vertically integrated manufacturing facility, which allows us to tailor the aerial weight of the facings, adhesive and honeycomb to achieve a fully optimized construction. In the example of Gillfab 4809, our use of unidirectional carbon reinforced facings not only supports weight reduction, but also provides higher impact resistance and panel stiffness at a lower cost than woven carbon. See Table 3 on the right.

TABLE 3

Panel Type	Current Design Max wt., psf (kg/m²)	Gillfab™ 4809 Avg. wt., psf (kg/m²)	% Weight Savings
Aisle/Entry Panel	0.58 (2.83)	0.47 (2.29)	18.9%
Low Traffic	0.46 (2.25)	0.40 (1.95)	13.0%
Utility/High Load Panel	0.80 (3.91)	0.57(2.78)	28.8%
Galley Panel	1.10 (5.37)	0.75 (3.66)	28.2%

Combined Resources – A Complete Design Solution

Like other aramid honeycombs, N636 can be shaped, cut and bonded using standard industry methods or heat formed to achieve more complex shapes. As manufacturers around the globe work to reduce their supply chain, there is a growing necessity to partner with suppliers who offer expanded capabilities to support a wide range of value-added services. The combined resources of M.C. Gill and Alcore, Inc.(USA) and Alcore Brigantine (France) offer customers a complete design solution. Acquired by M.C. Gill Corporation in 2001, Alcore and Alcore Brigantine have become the Corporation's centers of excellence for the machining, profiling and heat-forming of honeycombs. These facilities currently support major OEM programs with aircraft structure sub-assemblies such as flaps, slats, spoilers, rudders, ailerons and engine nacelles.



Their capabilities include:

- Planform detail trimming
- Chamfering
- Die cutting
- High-speed, hand routing of doublers or rebates
- Heat forming and heat soaking to contour
- Vacuum oven curing for splice, septum and skin bonding
- Potting and densification for hard attach points
- 3-axis and 5-axis CNC machining
- 3-D design and modeling

Alcore is qualified to the following process specifications:

Boeing D1-4426

Boeing D6-53993

Boeing BAC5317

Boeing BAC5514

DeCrane PS-28

Hurel Hispano IGC-042100

Lockheed Martin FMS-3010, FPS 1017

Middle River STP-65P113

Middle River Aircraft 72M001-D

CONGRATULATIONS TO ALCORE FOR AS9100 CERTIFICATION

Alcore successfully achieved independent third party accreditation to the Aerospace Quality Management System Standard AS9100 Rev B. This third party accreditation has been issued by AQA International, LLC.

"Meeting these stringent requirements and proving our commitment to delivering consistently high quality products are Alcore's goals. Earning AS9100 certification assures our customers that we are working for continuous improvement and that they can always count on us," said Alcore COO, Dave Cross.

To follow up on this achievement, Alcore is aggressively moving toward the National Aerospace and Defense Accreditation Program (NADCAP) process approval for core processing, with the expectation of becoming certified to the NADCAP Standard by early 2006. "This will be another step in assuring we meet these international standards for our customers worldwide," Dave Cross said.

Alcore manufactures a variety of metallic honeycomb cores for aerospace and other applications. The company also offers extensive special processing capabilities on metallic and non-metallic cores, from simple operations like chamfering to complex projects including roll-forming, 5-axis machining and splicing of different densities into core blankets.

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Alcore does not sell sandwich panels. Contact M.C. Gill for these products.

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Stephen Gill Announces M.C. Gill Corporation Hurricane Relief Donation

Stephen Gill, Vice Chairman, M.C. Gill Corporation, announced a donation to The Salvation Army Hurricane Relief program to assist hurricane victims on the Gulf Coast.

"Hurricane Katrina caused tremendous damage to the Gulf Coast, from Texas all the way across to Alabama, and we wanted to do something to help those people who have had their lives so disrupted." Stephen Gill explained.

M.C. Gill Corporation responded with a $10,000 corporate donation and matched additional employee contributions for a total combined contribution of $25,000. The donations were given to The Salvation Army with 100% of these funds going directly to assist the victims of Hurricane Katrina.

"I thank all of our employees and shareholders who showed great compassion and contributed to this relief effort," Stephen Gill said.

Donations were made by employees at M. C. Gill Corporation's headquarters in El Monte, as well as its domestic divisions: Castle Industries, located in Ontario, Calif. and Alcore, located in Edgewood, Maryland.

Trivia

Porpoises surf. They are frequently seen riding the bow wave of a ship. They make no swimming motions and can ride the wake for more than an hour. They can also turn on their side or flip completely around as they surf.

★ ★ ★

A giant squid's eye can be as big as a basketball.

★ ★ ★

Elephants purr like cats do, as a means of communication.

★ ★ ★

Manhole covers, the lids that cover sewers, are always round. This is because the round cover rests on a lip that is smaller than the cover so it can't drop through the opening. A square or rectangular cover, no matter how it was made, could fall through.

★ ★ ★

The cartoon character Donald Duck never wore pants. However, whenever he got out of a shower he would always put a towel around his waist.

★ ★ ★

Early Greeks and Romans used dried watermelons for helmets.

★ ★ ★

The lollipop is named after a racehorse.

The Funny Side

A programmer and an engineer are sitting next to each other on a long nonstop flight from Hong Kong to New York. The programmer leans over to the engineer and asks if he would like to play a game to pass the time. The engineer politely declines and rolls over to the window to catch a few winks.

The programmer persists and explains that the game is real easy and is a lot of fun. He explains, "I ask you a question, and if you don't know the answer, you pay me $5. Then you ask me a question, and if I don't know the answer, I'll pay you $5."

Again, the engineer politely declines and tries to get to sleep. The programmer, now somewhat agitated, says, "OK, if you don't know the answer you pay me $5, and if I don't know the answer, I'll pay you $100!" This catches the engineer's attention, and he sees no end to this torment so he agrees to play the game.

The programmer asks the first question. "What's the distance from the earth to the moon?" The engineer doesn't say a word, but reaches into his wallet, pulls out a five dollar bill and hands it to the programmer. Now, it's the engineer's turn. He asks the programmer "What goes up a hill with three legs, and comes down on four?"

The programmer looks up at him with a puzzled look. He takes out his laptop computer and searches all of his references. He taps into the airplane's satellite phone and searches the Net. Frustrated, he sends an e-mail to his co-workers, all for naught.

After about an hour, he wakes the engineer and hands him $100. The engineer politely takes the $100 and turns away to try to get back to sleep. The programmer, now more than a little miffed, shakes the engineer and asks "Well, so what's the answer?" Without a word, the engineer reaches into his wallet, hands the programmer $5, and turns away to get back to sleep.