



[theAMBICOnews]

L I M I T E D

Fall 2005 — Vol. 4.1

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AMBICO's MISSION

AMBICO Limited is dedicated to client service through a carefully selected network of manufacturer's representatives and independent distributors across North America and throughout the world. At all times, AMBICO Limited strives to address the special needs of its customers.

BUILDING A BETTER MOUSE-TRAP ... R&D AT AMBICO

An old cliché asks: "Do we need to build a better mouse-trap?" At AMBICO, the appropriate question would be: "How much better can a door get?"

We have found at AMBICO, that it is more challenging to stay out in front than it is to try to keep up. Constant progress in the areas of

More...



BUILDING A BETTER MOUSE-TRAP ... R&D AT AMBICO (continued)

research and development ensure that AMBICO remains at the forefront of the manufacture of leading-edge specialized door and frame products.

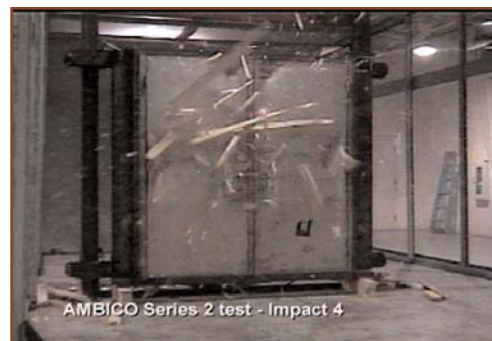
Over several years, the Research and Development Division of AMBICO has evolved into a vital and exciting activity center in our design area. We have always said that our clients' problems inspire us to investigate and innovate – however, research on door and frame products is triggered by a variety of factors:

Industry Standards and Health, Safety & Welfare Issues: building codes and various levels of legislation dictate that door and frame products meet minimum standards. We see the bar being constantly raised: more stringent fire ratings; higher STC levels required for certain applications; higher resistances to blast pressure; higher resistances required to meet unpredictable windloads; a requirement for a higher level of protection against radiation.

Door and frame products not only must be designed to meet or surpass these requirements, but often a project will require that a combination of these features must be incorporated into one door and frame unit.

Health and safety issues drive these standards and often many levels of government are involved in determining just what they should be. Products that don't meet "code" become redundant. Manufacturers who do not stay ahead of these ever-changing requirements are soon in that undesirable position of "playing catch-up".

Testing: in order to obtain performance certification, testing is conducted at leading, independent laboratories located across North America. AMBICO has submitted products for testing and certification since the 1960's. AMBICO engineers are well aware of the structural criteria which must be incorporated in order for a product to obtain a



AMBICO's Tornado Door Undergoing Vigorous Testing: 6'x2"x4" wood beam being blasted from a cannon at 100 mph at the door.

desired performance level. However, intensive research and subsequent testing is often required. The problem becomes more complicated when the door and frame unit is to be manufactured out of a different type of material, an altogether new material, or a combination of materials, whether known or unknown.

To this end, AMBICO maintains its own test area where prototypes are tested and re-tested before being shipped to a certified laboratory for vigorous testing and official certification.

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BUILDING A BETTER MOUSE-TRAP ... R&D AT AMBICO (continued)

Client Preference: most projects require a certain performance rating when specifying door and frame products: this might be STC; pressure resistance; forced entry resistance; bullet resistance; tornado resistance or resistance to a myriad of nature's forces. The client may then insist that this door unit must be "a thing of beauty" as well. Every material incorporated into the structure of a door affects its performance. Research into combinations of materials, finishes, glazing and hardware and their effects upon the properties of the final products, has resulted in the development of door and frame products which meet the particular requirements of each and every client.

Predicting the Future: At AMBICO, we pay attention to what our clients want.

Although we constantly strive to stay abreast of industry standards, the real trick is in predict-

ing what future trends may be. This is not an exact science. We believe that our ability to foresee change has played an integral part in AMBICO keeping ahead rather than keeping up. We might have the best door product of a certain kind in the market BUT, can we make it lighter? Can we make it more economical for our clients? Can we maintain the rating or enhance the rating in a larger door? Can we incorporate another performance rating in such a way that there is no compromise with respect to performance. Can we take a high performance door and develop equally high performance glazing?

Events such as the tragedy of 9/11 generated immense changes in the entire construction industry. We would be remiss if we did not look into the future and realize that owners of public facilities such as government buildings; financial institutions; airports; police facilities;

will be demanding construction products of much higher performance ratings in all areas - for the protection of employees and the public. In the short years since the World Trade Center catastrophe, we have witnessed a complete re-design of doors for high security areas such as airplane cockpits and other air travel related entries; customs areas; police and law enforcement facilities; government buildings; emergency shelters; and a resurgence of "safe rooms" in private residences. Doors and door and frame units are diligently developed and conscientiously manufactured to ensure their integration into the total performance requirements of an area, allowing no compromise. ■

WHEN A DOOR CLOSSES ... A WINDOW OPENS ...

How Research & Development Completed the Picture

AMBICO Limited is renowned for its specialized door and frame products. Manufacturing windows and window frames at one time would have been considered our secondary industry. Not satisfied with developing and manufacturing industry-leading doors and frames, AMBICO turned its attention to glazing. Recent developments have brought AMBICO recognition as a manufacturer of highly specialized window products.

For many years AMBICO Limited has manufactured blast and pressure resistant door and frame units to high ranges of performance, i.e. as high as 50 psi.

We knew it wouldn't be long before high range, blast resistant doors, would be required to include glazing and/or side lite frames.

A requirement for glazing or side lite frames is not a cosmetic issue. The ability to view from outside the door to the inside and from the inside to the outside, as well as the provision of light



The AMBICO test team (L to R) at the ABS test facility chamber: Steve Peterman, (Design), AMBICO Vice-President Judah Silverman, Jim Stockwell, PEng., (Research & Development)

through glazing within the door or through side lite frames are often requirements for certain projects.

In November, 2004, AMBICO Limited published a Press Release which announced that testing was

completed at ABS Consulting Laboratories in San Antonio, Texas, with results that were nothing short of amazing. In fact, AMBICO has developed "amazing glazing" which withstood the highest pressures the laboratory could apply - and which resulted in the destruction of their test equipment! The Press Release outlines the data from the tests which were conducted as per ASTM F1642-04; GSA-P-100; and DoD UFC 4-010-01.

The development of this glazing presents a break-through in an exceptional product required for specialized applications.

Although AMBICO has manufactured acoustic window products for a number of years, the development of this glazing provides an excellent example of AMBICO anticipating the future, and proactively researching the development of acoustic windows with a high sound attenuation.

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WHEN A DOOR CLOSSES ... A WINDOW OPENS ... (CONT.)

Again, in November 2004, AMBICO published a Press Release which announced that its fixed steel assembly window had achieved a rating of STC-56 in accordance with ASTM E 413-87. Earlier we spoke of research finding a way to manufacture a product but the client also requires that it be, "... a thing of beauty ..." as well. AMBICO's STC-56 windows have the appearance of standard, fixed architectural windows and install seamlessly into most walls and architectural styles.

These windows are of particular value in projects such as broadcast studios and testing laboratories which require high performance sound attenuation. ■

WHAT'S IN STORE:

The AMBICO "Company Store" contains a number of stock items at any given time. These are acoustic, stainless steel and bullet resistant products which are commonly required in the construction of certain types of buildings, i.e. government; financial; law enforcement; military; various travel industry locations. In this issue of the AMBICO e-newsletter we highlight bullet resistant in stock items which are of particular interest to our customers and which are available for immediate shipping.



Bullet resistant steel doors and bullet resistant steel frames:

- UL Level Three (protection against super power small arms [.44 Magnum Revolver])
- UL Level Four (Protection against high power rifle attack [30-06 rifle] where anticipated threat levels are extremely high)
- UL Level Eight (protection against military assault weapons using armour piercing ballistics).

Factory supplied lock-set and hinges are advised.

Factory supplied bullet resistant glazing is also available.

Doors can be shipped immediately. Frames are available as required. They will be manufactured to suit in 5 - 10 working days. ■

THE AMBICO SOLUTION: "BEAUTY AND THE BEAST"

Our clients' problems inspire us. Over the years AMBICO has been asked to develop highly specialized products, often under extremely tight schedules. AMBICO has reported on a number of these interesting projects, which have been undertaken to provide the solution to unique situations - meanwhile, meeting our stringent production standards. We have catalogued many successful and interesting conclusions.

We are constantly presented with challenges ... the Research and Development team, along with the Design team, work together to provide solutions to our clients' unique problems.

The problem: the Milwaukee Zoo required a special door for the enclosure of a very special

inhabitant: a beautiful, large and virile, lion.



The door would include a viewing opening or window, which would be set at an unusual height, in order that the public, walking

past the enclosure on a lower level walk-way, could look in and see "Leo". Specifications required that an indestructible mesh be incorporated in this viewing window area. The door had to meet bullet resistance level UL 8, and, as well, forced entry requirements.

The finished door, although unusual in appearance, was actually quite attractive: it combined the beauty and endurance of stainless steel with a high performance rating and the specially designed viewing opening. Thanks to this beautiful door, visitors to the zoo are able to enjoy an unobstructed view of the king of beasts, "up close and personal"! ■

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WHAT'S NEW?



AMBICO Limited has recently made a series of announcements, through a number of Press Releases. One of the most exciting is the introduction of a wood acoustic door with a fire-rating never before achieved with wood door of this rating.

Fire endurance tests were conducted at Intertek ETL Semko Laboratories in Vancouver British Columbia, Canada, on AMBICO's STC 50 wood door. These laboratories accord Intertek/Warnock Hersey Certification.

Tests were conducted on a wood-clad acoustic door, in accordance with UL 10C, UBC 7-2(1997) Part 1, NFPA 252, and ASTM E2074-00.

The AMBICO STC 50 wood door achieved a **90-minute fire rating** in accordance with positive pressure requirements. This has never before been achieved by an STC-50 wood acoustic door.

In the past, our 45-minute fire label was the highest certification available for these doors.

This door product is of particular interest to education facilities; planners; engineers; architects; spec writers and acousticians. ■

ON LINE LEARNING COURSES...



In 2005 AMBICO is participating in the presentation of [On Line Education](#) for architects who are seeking annual certification. The AMBICO course, "Specialized Steel Doors and Frames", is available on line through the AEC Daily web site, www.aecdaily.com. Architects who qualify for accreditation by taking the AMBICO course receive 1.0 EU (Education Units) towards their certification. For more information regarding this on line education course, please contact Jack Shinder, President, AMBICO Limited through the "Contact Us" section of this newsletter. ■

CONTACT Us



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