

Industry News

oxygen which lose all resistance to electricity when cooled to temperatures of 120 K or higher. These include the material with the world-record zero-resistance transition temperature of 125 K—still the highest confirmed transition temperature reported for any stable superconductor.

The inventors are Edward M. Engler, Victor Y. Lee, Adel I. Nazzal, and Stuart S. P. Parkin. They first reported the materials in February 1988. Earlier research at the University of Arkansas had shown that superconductivity could be achieved in some thallium-based materials at around 100 K. In the IBM work, the scientists discovered that only by using certain new elemental proportions of thallium, calcium, barium, and copper, together with new processes, were materials with superconducting transition temperatures above 120 K obtained.

Joining Technology Developed for Stained-Glass Windows

A manufacturer and restorer of stained-glass windows, Michel et Daniel Bataillou 21 (R. Des Paradoux, 31000 Toulouse, France) has developed a method for attaching stained glass to industrial glass sheets with the help of several French research organizations. Called Silovitrail, the technique uses conventional glass backing in combination with silicone elastomers developed by Rhone Poulenc. Adherence of these elastomers to the glass backing has been optimized by very specific adherence promoters to increase hydrolysis resistance.

Laboratory tests for aging and resis-

tance to dynamic stresses have shown promise. A prototype successfully underwent accelerated aging during six months in a climate chamber under conditions of cold, heat, UV and IR radiation, fog, and rain. Another sample underwent and survived without damage eight cycles of -30° to 100°C and one of -63° to 200°C . In an explosive shock test, the Silovitrail resistance was six times that of conventional stained-glass windows.

Baldwin Defiance Assets Acquired by Mohr Industrial

Mohr Industrial Corp., Detroit, MI, has acquired the powder compacting press assets of Baldwin Defiance Industries, Inc. The assets include engineering records and drawings, a number of partially finished presses and an inventory of spare parts. Mohr Industrial plans to continue marketing pressing equipment under the Baldwin name.

Lockheed Donates Aeroacoustics Facilities to Georgia Tech

Lockheed Aeronautical Systems Co. has donated a group of advanced aeroacoustics, fluid dynamics, and aerodynamics research facilities to Georgia Institute of Technology. The facilities were formerly part of Lockheed's Advanced Flight Sciences Dept.

The donation includes a unique anechoic flight simulation chamber, flow visualization laboratory, static-test anechoic/reverberation chamber, hot jet flow

facility, two low-speed wind tunnels, and a multipurpose facility for small experiments. Instrumentation such as laser velocimeters and computer data analysis equipment is also included.

"This acquisition gives Georgia Tech the opportunity to become a university leader in computational and experimental fluid dynamics, aeroacoustics, and aerodynamics research," said Robert Cassanova, director of the Aerospace Program Office in the Georgia Tech Research Institute. "These facilities will complement existing Georgia Tech wind tunnels and rotary wing facilities."

New Materials Processing Corporation Formed

The formation of a new company engaged in materials processing research and development, Containerless Processing, Inc. (CPL), has been announced by Charles Rey, chair, and Paul Nordine, president. CPL will develop new proprietary and ultrapure materials using state-of-the-art technology derived from NASA space experiments and other related work. CPI also will provide clients with unique laboratory equipment and measurement services, specializing in very-high-temperature phenomena and noncontact processing.

For further information, contact Containerless Processing, Inc., 3453 Commercial Ave., Northbrook, IL 60062; telephone 312/272-1772, fax 312/272-9324.

USACA Creates Development and Commercialization Program

In order to reach the goal of supporting and creating a strong and viable domestic advanced ceramics industry, the United States Advanced Ceramics Assn. has created a six-point Advanced Ceramics Development and Commercialization Program. Designed to influence federal government policies and budgets, the program will:

- Create a multi-year Federal Ceramic Components Demonstration Program that would support the domestic development, manufacture, purchase, and in-use demonstration of advanced ceramic components and parts. This program would target military and commercial areas.
- Create a Defense Production Act (DPA) Title III Advanced Ceramics Program. This program would take the form of purchase commitments (guarantees) to buy ceramic components produced by domestic advanced ceramics manufacturers for



Stained-glass windows of this magnitude can be produced with the Silovitrail process, offering an aesthetic appearance comparable to traditional stained-glass in addition to greater resistance to extreme weather conditions.