

INDUSTRIAL INSIGHTS



a publication of the SMACNA
Industrial Contractors Council

Volume 6, Number 1
March 2002

Inside Insights...

Featured Projects of SMACNA Contractors

Vulcan Material
Corporation, McCook, Ill.
TAL-MAR Custom Metal
Fabricators Inc.,
Crestwood, Ill.1

Kimberly Clark Tissue
Finishing Area,
Chester, Pa.
Ernest D. Menold Inc.,
Lester, Pa.4

Montezuma
Manufacturing,
Montezuma, Iowa
Du-Mont Company,
Peoria, Ill.6

Also Inside

Gaining More of the
Welding Market3

Illinois Plant Meets EPA Standards Thanks to a SMACNA Contractor

Vulcan Material Corporation, McCook, Ill.

Sheet Metal Contractor: TAL-MAR Custom Metal Fabricators Inc., Crestwood, Ill.

With a strong warning from the Environmental Protection Agency (EPA) facing their client, the crew at TAL-MAR had to work quickly to fabricate and install the dampers and quench tanks for the air scrubbers at the Vulcan Material plant.

“The installation of the dampers on the 100-foot stack required the use of both a 40-ton and a 200-ton crane,” explained Jim Cesak, of TAL-MAR. “In two days, our crew installed two 1/4-inch plate dampers that measured 78 inches in diameter and mounted the rectangular duct to the stack. The rectangular tee was welded onsite to the 6-foot 6-inch stack.”

See **Vulcan Material Corporation** on page 2

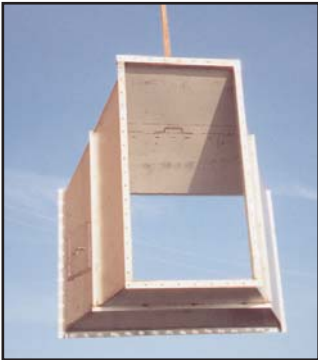
The 78-inch diameter plate damper is lowered onto the work platform before installation on the 100-foot high stacks.



Illinois Plant Meets EPA Standards Thanks to a SMACNA Contractor

Vulcan Material Corporation, McCook, Ill.

Sheet Metal Contractor: TAL-MAR Custom Metal Fabricators Inc., Crestwood, Ill.



On the Cover



Upper Left: Using lifting lugs to keep the piece on a vertical plane, the duct segment is hoisted into place.

Bottom Left: The upper stack is secured into place using Grade 5 bolts, nuts and washers as well as high heat caulk. The two cranes operated in close proximity throughout the installation.

Center: While bolting down a locking angle to secure the damper blade open, TAL-MAR crew members use the required safety equipment.

Convention Forum to Focus on Industrial Training

Industrial sheet metal training will be the focal point of the Industrial Contractors Forum on Tuesday, Oct. 22 at SMACNA's annual convention, Oct. 20-24 in Las Vegas.

The first segment of the industrial training session will be dedicated to an overview of the variety of products, programs and services offered by the International Training Institute (ITI) for the sheet metal industry.

One essential service offered through the ITI is the ITI/American Welding Society (AWS) Welding Certification program. Since its creation, the program has assisted countless SMACNA Contractors secure work by providing welding certification. During the session, an ITI welding assessor will discuss the current program and the plan to expand the service as well as

present examples of SMACNA members who have used the service to secure jobs. (See related article on page 3.)

The final portion of this session will focus on the array of safety and health products provided through the Sheet Metal Occupational Health and Safety Institute (SMOHIT) and SMACNA. The emphasis will be on the products and programs especially useful to contractors in the industrial market sector.

The forum will conclude with a one-hour roundtable discussion, led by the Industrial Contractors Council Steering Committee, on critical issues facing this market sector.

For more information on the Industrial Contractors Forum visit the Industrial Contractors Web site in the "market sector councils" area at www.smacna.org. ▼

Restructured Certification Program Focuses On Gaining Welding Market Share

The International Training Institute (ITI) Welding Certification Program, recognized and approved by the American Welding Society (AWS), has assisted many SMACNA Contractors in securing projects. The program has been so successful that demand for welding certification is far exceeding current available ITI resources.

To meet this overwhelming demand for welding certification, the ITI is embarking on a three-year plan to take its outstanding welding program to the next level, which will in turn help SMACNA Contractors gain more of the industry's welding market.

This restructured program will enable every sheet metal contractor with a signed collective bargaining agreement to have their own Certified Welding Inspector (CWI)/Test Supervisor to perform remote

AWS welder qualifications and inspections.

Current Structure

The ITI/AWS Certified Welder Program was originally developed by the ITI and AWS to enable joint apprenticeship and training committees (JATCs) to issue AWS certifications. Recognized worldwide, AWS certifications are typically accepted by engineers, architects, construction managers and other design professionals – with no questions asked.

There are currently 75 accredited test facilities (ATF) available for SMACNA members. Each ATF is required to have at least one AWS Certified Welding Inspector (CWI), who will be trained to become a test supervisor. In addition to the ATFs, there are currently five regional assessors covering the United States and Canada. These

assessors have been trained by the AWS to accredit the local JATC welding lab.

In addition, the assessors also provide locals with a means of certifying their SMWIA members by actually performing performance certification for individual members. This fulfills an immediate need for qualified welders in locals that have not yet become accredited for testing. The assessor also assists the JATCs and contractors in writing specific welding procedure specifications and assists in qualifying the procedures when required.

New Structure

Under the new structure, ITI assessors will accredit and audit test facilities, provide

See ***Gaining the Welding Market*** on page 5

Industry Market Opportunities Predicted

FMI's "2001-2002 U.S. Markets Construction Overview" named several areas that may provide industrial contractors construction opportunities this year.

"The biotechnology and pharmaceutical markets have demonstrated strong growth rates. The food and beverage side of the industrial sector continues to preserve its reputation as a steady segment for contractors, not appearing to grow or decrease by any significant percentage."

"Industrial building improvements equaled nearly two-thirds of total new industrial construction, revealing the increasing attractiveness of revamping previously built industrial buildings instead of constructing entirely new structures. Improvements to existing industrial buildings grew by 3 percent in 2000 to \$9.6 billion – nearly the same level that this sector experienced in 1997." ▼

Reprinted with permission from the "2001-2002 U.S. Markets Construction Update," FMI Corporation, (919) 787-8400.

Industrial Ventilation Conference Schedule Announced

Combining lectures with problem-solving sessions on how to design ventilation systems, the University of Nevada at Las Vegas will host an Industrial Ventilation Conference, June 17-20. The University of Alabama at Birmingham will host the same conference, Oct. 14-17. The conference instructs attendees on how to provide effective and economical ventilation through proper application of established principles based on the "American Conference of Governmental Industrial Hygienists (ACGIH) Industrial Ventilation Manual," the source of ventilation guidelines contained in the Occupational Safety and Health Administration (OSHA) standards.

Designed for plant engineers, sheet metal contractors, consulting engineers as well as others involved in the design, maintenance and performance of ventilation systems, the lectures and hands-on problem-solving sessions lead participants through the step-by-step design of various types of ventilation systems. Students select appropriate exhaust hoods, determine air volume and minimum duct velocity, size duct, calculate system pressure loss and select fans and air cleaning devices along with instruction on a variety of other ventilation topics.

In addition to the general sessions, attendees will attend classroom lectures customized to their job function or experience level. These half-day programs focus on topics such as ventilation systems design, intermediate systems design, advanced systems designed, non-standard air design and plant engineering/ventilation design.

The registration fee for the three-day program is \$595. For more information, contact the University of Alabama School of Engineering at (205) 934-8994 or visit www.eng.uab.edu/epd. ▼

Fast-Track Project Offers Challenges to Crew

Kimberly Clark Tissue Finishing Area, Chester, Pa.

Sheet Metal Contractor: Ernest D. Menold Inc., Lester, Pa.

Working within the confines of a short 12-week production schedule, the craftsmen of Ernest D. Menold fabricated and installed three air handling units for the Kimberly Clark plant tissue finishing area.

The large-scale paper producer required that the ventilation system in the tissue finishing area be ventilated with 100 percent outside air. The crew at Menold fabricated the three 75,000 cfm units in only nine weeks using galvanized steel, stainless steel and embossed aluminum with fiberglass

insulation on the interior. The onsite installation on a five-story roof was completed in three weeks while the plant remained in operation. In addition, the units are designed to allow the future installation of heating coils to warm the outside air during the winter months.

“This fast-track project offered several challenges to our crew,” commented Ernest J. Menold. “We worked to meet the client’s needs on time and within budget. The client is pleased with the results.”



Each completed unit was installed on the roof of the five-story facility.

Alliance Manual Provides Project Managers with the Right Tools

The project manager is the center of every construction project. It is a job with many facets, a job that requires leadership, technical knowledge, sound judgment, common sense, sensitivity to people, excellent communications skills and a knack for diplomacy.

Designed to help project managers meet all the responsibilities of their job, SMACNA in conjunction with the Mechanical Contractors Association of America (MCAA) and the National Electrical Contractors Association (NECA) developed the “Alliance Project Management Manual.”

The manual is a compact source of general information on project management offering tips for handling day-to-day situations. When combined with each firm’s policies and procedures, it becomes an indispensable tool for effectively managing all the duties of project management.

Each chapter addresses an issue a project manager faces during the course of a job. Starting with the “kick-off and pre-planning meetings,” working through change orders, project and job site organization, billing procedures and finally to project review, the manual offers advice and suggestions for handling each aspect of a job. Also included are dozens of checklists that project managers may put to use immediately.

SMACNA Contractors may purchase the “Alliance Project Management Manual” for \$150. The price for non-members is \$450. There is a quantity discount available when purchasing more than five copies. The manual may be purchased at www.smacna.org by selecting “publications” or calling the SMACNA Publications Department at (703) 803-2989. ▼

New Industrial Workshop Responds to Training Needs

A two-day Industrial Training Workshop has been developed by the Industrial Contractors Council in response to contractor concerns for specialized training for the industrial sector.

The workshop, developed by a joint task force of SMACNA members and representatives from the International Training Institute (ITI), is designed for journeymen and foremen in the sheet metal industry.

Focusing on welding specifications, standards and equipment, the first two sessions examine the value of the welder performance qualification testing and feature a demonstration of new technologies and equipment.

A hoisting equipment manufacturer will provide onsite demonstrations to the group during the third unit.

Using the ITI Project Management Handbook, unit four reviews the steps for effective project management in an industrial plant shutdown situation.

The workshop concludes with a session reviewing the variety of products, services and training available from SMACNA, the ITI and the Sheet Metal Occupational Health Institute Trust (SMOHIT) to keep industrial craftsmen safe in the shop and on the jobsite.

A pilot session of the workshop is planned in the spring or early summer. More information on the pilot workshop will be provided in a future SMACNA membership update. ▼

Shop Profile

Using the Shop Burden Method to Maximize Your Business

When the time came for George Hulett to reconfigure the shop layout at his Columbia, Mo. firm, he wanted to assure the best possible return on each investment made in new equipment.

“In the early months of 2000, we met with an industry consultant, Jim Segroves, to address the operations of our sheet metal shop,” explained George Hulett, president of Hulett Heating and Air Conditioning. “We had several meetings with Jim and he offered recommendations for equipment and adjustments to the layout of the shop.”

When analyzing the operations at the Hulett shop, a combination of shop burden calculations and projected return on investment calculations were used to provide Mr. Hulett with a clear picture of how these decisions would affect his firm. “The shop burden calculations for the Hulett firm enabled them to compare their ‘real’ fabrication overhead expenses with the values they had traditionally used and make adjustments as they needed to be fair to both their customers and to the company,” explained Jim Segroves, of Jim Segroves Consulting. “In addition, because Mr. Hulett was considering the purchase of a substantial amount of shop equipment, I incorporated calculations for the projected return on investment as it related to new products that the proposed equipment would provide.”

The complete shopping list recommended by Mr. Segroves has allowed the Hulett shop to make a transition from traditional HVAC work to a combination of HVAC and industrial specialty work. With a final price tag of close to \$350,000, the shop has been outfitted with a new heavy shear, 40-ton iron worker, 200-ton CNC controlled press brake and high-definition plasma cutting table as well as several pieces of welding equipment. Just the addition of a new precision plasma cutting machine, which cuts high-quality weldable edges on a variety of metal up to one inch thick as well as cutting the lighter gage of HVAC ductwork, allowed the Hulett shop to easily diversify its product base.

The shop layout also has been configured to take advantage of operating under the principles of lean production. With total floor space of close to 14,000 square feet, the shop was adjusted to house the new equipment enabling staff members to work in comfort and safety.

“Even though it has only been a year, the addition of the new pieces of equipment has already increased the flow of work for the shop,” commented Mr. Hulett. “The heavy shearing that we used to send out can now be performed in house. Our customers appreciate our ability to turnaround their projects quicker.” ▼

Publication Spotlight

Understanding Shop Burden with SMACNA’s Shop Burden Guide

With minor exceptions, the sheet metal industry is the only construction industry segment that consistently takes raw material and fabricates that raw product into a finished or semi-finished form within the shop environment. The investment in the sheet metal shop and equipment is a substantial investment that many times is questioned by customers when reviewing “shop burden fees.”

In its simplest terms, shop burden can be thought of as the fee sheet metal contractors charge for operating their facility and equipment. The SMACNA “Guide to Determining Shop Burden,” first edition, is based on a study of SMACNA Contractors and is designed to provide the industry with a better understanding of shop burden costs in sheet metal and HVAC operations. The book explains the uniqueness of the market and provides examples of shop burden costs, including lists of what should be considered as part of this expense. The publication also includes basic formulas used in the industry for recovering shop burden costs.

The “Guide to Determining Shop Burden” is available to SMACNA members for \$16 and to non-members for \$75. Purchases may be made online at www.smacna.org by selecting “publications” or by calling the SMACNA Publications Department at (703) 803-2989. ▼

Gaining the Welding Market

Continued from page 3

technical support to the ATF Welding Supervisor and teach courses on becoming a welding supervisor, test supervisor or a certified welding inspector.

Participating contractors may have an AWS Certified Welding Inspector/Test Supervisor on staff. This individual will perform remote AWS welder certifications and inspect production weldments. Contractors will also have the opportunity to become an AWS Welding Fabricator Shop.

The JATC/ATF will still have one or more CWI test supervisors as well as a welding supervisor on staff. After attending the ITI Welding Supervisor Course, the welding supervisor will also provide each contractor’s in-house CWI test supervisor with technical support, assistance in writing procedures and assistance in qualifying procedures. They will also performance test welders.

More details on the restructured ITI/AWS Certified Welding Program will be available in an upcoming SMACNA membership update. For more information about the ITI/AWS Certified Welder Program contact your regional ITI welding assessor at (703) 739-7200 or your local SMACNA chapter. ▼

SMACNA Members Only

Customized Industrial Insights Newsletters Available!

The Industrial Insights newsletter is a great opportunity for SMACNA industrial contractors to promote the specialized large-scale projects they complete. This four-color newsletter features projects ranging from industrial HVAC systems to clean room installations.

As an additional benefit, SMACNA Contractors whose projects appear in Industrial Insights may now purchase a one-page featured edition newsletter. The featured edition disk will highlight the project that appeared in Industrial Insights with the newsletter masthead and SMACNA logo. The featured edition disk costs \$500 and is available to SMACNA Contractors featured in this publication.

All SMACNA Contractors with a featured project in this issue will receive five complimentary copies of the issue with a request form to purchase the customized featured edition disk. Contractors with projects featured in previous issues of Industrial Insights may also purchase the featured edition disk.

For more information on this marketing opportunity, contact Danielle Dobiesz, SMACNA communications manager at (703) 995-4036 or ddobiesz@smacna.org. ▼

The Industrial Insights Featured Edition may be used as a creative promotional flyer to publicize your recent work.



Improving the Air Quality For Man and Machine

Montezuma Manufacturing, Montezuma, Iowa

Sheet Metal Contractor: Du-Mont Company, Peoria, Ill.

The haze that hung over the automated robotic welding line at this Midwest manufacturing plant was causing a serious air quality problem for the employees of the plant. The owners recognized the need to enclose the welding area to control the fumes and provide better air quality to the plant.

The \$450,000 project required the team from Du-Mont Company to design, fabricate and install a 65,000 cfm welding fume collection system using galvanized carbon steel, spiral ductwork and metal decking. "We understood that it would be a challenge to enclose the robot line without interfering with operations of the plant," commented Bob Williams, of the Du-Mont Company.

Using structural steel framing covered with metal decking, the 170-foot-by-40-foot welding area was enclosed with UV-rated clear vertically hanging welding curtains. The exhaust air is collected within the enclosure and at the various exhaust hoods then cleaned by the Torit Cartridge Collector. The clean air is returned to the plant.

"Before the project began, there was a visible haze of fumes in the production area," Mr. Williams explained. "After the system was initiated, the air quality immediately improved. Everyone from the plant manager to the welding line employees visibly noticed the cleaner air."

The 6,800-square-foot robotic welding area was enclosed to provide cleaner air to the facility.



SMWIA Issues Letter of Understanding For Food Processing Industry

A new letter of understanding signed by local union business managers in a number of Western states and Michael J. Sullivan, Sheet Metal Workers' International Association (SMWIA) general president, will allow contractors signatory with SMWIA local unions to perform food processing work using an expanded five-man rule.

The letter of understanding may be used in the following jurisdictions by contractors whose business operations are located in Local 9 – Colorado; Local 10 – Minnesota; Local 16 – Oregon; Local 23 – Anchorage, Alaska; Local 26 – Reno, Nev.; Local 29 – Wichita, Kan.; Local 49 – New Mexico; Local 60 – Idaho; Local 66 – Washington State; Local 88 – Las Vegas; Local 103 – Montana; Local 213 – Boise, Idaho and Local 312 – Utah.

The letter of understanding covers the installation, dismantling, conditioning, adjustments, alterations, repairing and servicing of food processing systems. Food processing includes the processing,

packaging or canning of food products for human or animal consumption.

In order to perform work under the letter of understanding, the contractor must notify the jobsite local union business manager of the intent to perform work within the local union's jurisdiction; be signatory to the home local collective bargaining agreement; provide information on the scope of work, probable duration of the project, craft assignments and required manpower for the project; provide letters of assignment; estimate and discuss a method for acquiring additional manpower for emergency situations that may arise outside of normal business hours; hold a pre-job conference; and sign the letter of understanding.

Questions regarding the letter of understanding can be directed to any of the signatory local unions or through the SMWIA Jurisdiction Office at (202) 662-0825. ▼

Selecting Software That Is Right for Your Firm

Making a conversion to a new software package is never an easy decision for a firm to make. So many factors must be considered from how will employees react to the change, will the new software work with existing programs and will there be technical support available after the conversion.

When selecting a software package for their firm, the management of WES-CO Industries in Oakland, Calif. chose the JobBOSS® shop management package from Kewill. "Having all our personnel on one system with the ability to track estimating, sales leads, material management, accounting and job progress is a big advantage of the software," commented Bill Hussey, shop manager at WES-CO.

The initial conversion to JobBOSS® began in May 2001 when the estimating and job release departments were placed on the system. In July the main shop started using the time maintenance module to monitor job costs. Finally in November the accounting department was added to the package. "For most of the year we were entering all data twice to monitor our fiscal records through the midyear conversion," explained Mr. Hussey. "Having two systems operating allowed the time to work through the 'learning curve' for the new program."

"Overall we have been very pleased with the package," Mr. Hussey said. "The tech support during the conversion was great and the telephone customer service is very knowledgeable. Although several of the forms are generic and making customizations does cost extra, we're learning to work around the few shortcomings. The benefits of having every department on the same system outweigh the few problems." ▼

SMACNA Launches New SMACNA Industrial Contractors Web Site

Take a moment to visit the updated Industrial Council Web site at www.smacna.org and take advantage of a variety of tools to help your business grow.

The site features a complete listing of all members of the SMACNA Industrial Contractors Council. If a facility manager would like to hire an industrial contractor, the state-by-state list is at their disposal.

The recently redesigned SMACNA Web site features a new homepage for the Industrial Contractors Council. SMACNA Contractors in the industrial sector will find many topics selected especially for this diverse market sector.

Industrial Insights Newsletters

Recent issues of the Industrial Insights newsletter are available to review at the Web site. The complete issue may be downloaded as a pdf file or you may view individual articles. With this updated design contractors are now able to print or e-mail specific features to staff or clients.

Related Resources and Links

Visiting the Industrial Council homepage offers visitors access to several industry related Web sites. This feature allows users to hyperlink to industry resources such as the Environmental Protection Agency (EPA), Pollution Engineering Online and the American Conference of Governmental Industrial Hygienists.

SMACNA members may also access meeting reports from the Council. ▼

Discover What Software Other SMACNA Members are Using

Selecting and using the appropriate software for your firm is essential to stay competitive. But, how do you know what to select? The help and advice of your fellow contractors could greatly enhance your ability to select the appropriate software for your firm or maximize the software you already have.

In order to help SMACNA members in their search for software, SMACNA has developed a real-time online version of the SMACNA Computer Software Survey, located on the SMACNA Members Only Web site at www.smacna.org. To access the survey, you must be registered for the Members Only site.

The Online Software Survey offers members a convenient way to stay up-to-date with current software, which constantly changes.

This networking tool enables you, as a SMACNA member, to locate and contact other contractors who either use the same software or who use software that may interest you. The survey categorizes software packages into ten different groupings. They are accounting; CAD/CAM/CADD; calculation-heat/pressure; cutting/fabrication; duct layout/sizing/estimating; facility management; HVAC design/analysis; networks; project management/scheduling and service.

To access the data, you must complete the survey. To do this, go to the SMACNA homepage, www.smacna.org, select "Members Only" from the menu on the left side of the page. If you have not registered for access to the "Members Only," you will be prompted to complete the member registration. A drop down menu will appear and you select "software survey." Once at the survey, click on "complete software survey."

Completing the survey will enable you to access the "query software applications" section. You may search this section by selecting a software package for any category, inputting a user's name, city, state or primary work category to learn what software program they are using. Selecting more than one criterion puts a higher constraint on the result set. If you do not find any matches, consider searching for fewer specified software packages.

If you have any questions on the software survey or how to access SMACNA's Members Only site, contact SMACNA's member services department at (703) 995-4024 or e-mail at info@smacna.org. ▼

Sign Up Today for a Free Subscription to Industrial Insights.

(Non-Member Response Only.)

(please type or print clearly)

Yes, continue sending me a free subscription to SMACNA's Industrial Insights newsletter.

Name _____

Company Name _____

Address _____

City _____

State _____ Zip _____


Phone (____) _____ Fax (____) _____ E-mail _____

Please send me
E-News
Yes / No

Return this information to:
Sheet Metal & Air Conditioning Contractors' National Association
4201 Lafayette Center Drive • Chantilly, VA 20151
Phone: (703) 803-2980 • Fax: (703) 803-3732

Industrial Insights is a biannual newsletter published by
SMACNA's Industrial Contractors Council Steering
Committee.

Executive Editor: Rosalind P. Raymond
Editor: Danielle A. Dobiesz
Communications Specialist: Denise J. Ladd
Council Liaison: Thomas J. Soles Jr.
James F. Pierzynski



Sheet Metal and Air Conditioning Contractors' National Association
P.O. Box 221230, Chantilly, VA 20153-1230
Phone: (703) 803-2980 • FAX: (703) 803-3732
www.smacna.org • E-mail: info@smacna.org

PRESORTED
STANDARD
U.S. POSTAGE
PAID
Bowie, Maryland
Permit No. 4434