

# Solving the Inspector Shortage

*A workforce development grant is helping introduce new people to inspection and upgrading experienced workers' inspection skills in the Houston area*

BY MARY RUTH JOHNSEN



*Students are shown taking the ATTC ultrasonics testing classes at San Jacinto College.*

A collaboration between a professional association, a community college, and a government agency is working to provide industry in the Houston area with the inspectors it needs. Partners in the endeavor are the Association of Plant Inspection Professionals (APIP) and its member companies, and the Continuing and Professional Development Division of San Jacinto College, Pasadena, Tex., with funding from a \$3 mil-

lion grant from the Texas Workforce Commission (TWC).

All training, including the costs for tuition and books, is provided free of charge to the students. The program, officially called the APIP Texas Training Consortium (ATTC), has two purposes, explained Sherry Jones, executive director, Continuing and Professional Development, San Jacinto College. First is to provide new inspectors; second is to upgrade the skills of inspectors already working in the field.

## How the ATTC Began

The genesis of the program began in July 2005 when the APIP formed a Trainers Roundtable to discuss ways to encourage people to join the inspection industry, encourage trainers to become association members, and develop a template for training classes, recalled Bill Hatler, APIP chairman of the board. The Association of Plant Professionals is a nonprofit organization whose membership includes individuals, inspection companies, and other organizations that provide support to the inspection industry.

"We realized there was a real shortage of people entering our industry," Hatler recalled. "The end users (of inspection personnel) were worried they couldn't do what they needed to because of a shortage of people."

Training was available in the area. In fact, San Jacinto already had a two-year associate degree program in inspection that was steadily losing enrollment. But until the ATTC, there wasn't a concentrated effort to get workers into the classes. The idea of

the program appealed to the college, Jones said, because it was a good fit for its expansion plans and it was already doing a lot of work with companies in the energy and aerospace industries. The APIP knew what industry needed; the college had the expertise to apply for the grant, the facilities and equipment, and the knowledge necessary to administer the training programs. Once the two paired, it “took off like a rocket,” Hatler said.

“As an industry-driven initiative, and one of the largest funded grants from the TWC, this award allows San Jacinto College to significantly increase the training offered to this industry,” said Dr. Bill Lindemann, chancellor of San Jacinto College, in July 2007, when the grant was officially awarded. “A great deal of responsibility is placed in the hands of NDT technicians and inspectors who assist to keep the plants operating safely and who continually support the evolving construction and operational needs of the petrochemical and power companies in our region. For the first time in a long time, we’re all on the same page to support the citizens and businesses in the community.”

## How the ATTC Works

While the training is free, students can only enroll in classes if a participating company sponsors them. The college has advertised the program, including on the back page of its continuing and professional development course catalog, which reaches more than 230,000 households in the Houston ship channel and Clear Lake areas. The ads direct prospective students who are new to the NDE industry to APIP’s Web site or to a phone number at the college. Links on the Web site direct the students to the companies; if they phone, they speak directly to a college employee who tells them how to proceed. Once hired, the company sends them to the classes. Companies can also send experienced workers to the classes to upgrade or expand their skills. Following training, the students must remain with the company for a minimum of 90 days. Students do not receive college credit for the concentrated, fast-paced classes.

Martha Sells, who was the Workforce Development program manager but has since moved to another position with San Jacinto, explained that each company has a representative who is sent a weekly e-mail detailing which classes are available. Attached to the e-mail is a reservation form. If the company has a trainee it wishes to enroll, the company rep returns the form to enroll the student.

The school has twice applied for extensions to the grant period; it will end December 31 of this year.

One reason for the extensions was that the ten companies involved initially just weren’t enough to provide as many students as it would take to use the grant monies. “The original companies just couldn’t send as many students as we initially thought,” Jones explained. “We had to get a larger population of companies involved.” Today, 48 companies send workers for training. The Texas Workforce Commission must approve each company added to the program.

More than 30 courses are offered (Table 1). They include instruction in nondestructive test methods such as radiography, ultrasonic, magnetic particle, liquid penetrant, and eddy current; classes to prepare students for the AWS Certified Welding Inspector and API 510, 570, and 653 tests; and business-related classes such as Technical Report Writing and Essentials of Leadership. Through September 8, more than 67,000 hours of training had been conducted (Table 1).

While all classes are conducted at the college, the instructors and curricula come from several sources. San Jacinto instructors teach five courses including report writing and the ones related to computer skills. Jones said outside vendors were hired for the other courses — Hellier, for the NDE classes, and others for some of the prep courses.

## What Students Had to Say

So has the ATTC accomplished what it was supposed to? Yes, according to three students who spoke to *Inspection Trends*.

Carlos Yequez took several classes in order to upgrade his skills. Venezuelan-born Yequez came to the United States seven years ago, and has worked for MISTRAS for the past six as an NDE field technician performing radiography and dye penetrant and magnetic particle testing. He took advantage of the API 510 and 570 prep classes and passed both tests. In only a few months, he was promoted to field supervisor and then to field inspector. Today, instead of performing NDE, “I plan and schedule when and where tests have to be done,” Yequez said.

“Definitely, it’s been a huge benefit for me to take the classes,” he said. “I didn’t have any experience when I came to MISTRAS. What I have accomplished, especially since taking the classes, has been amazing and rewarding.”

Yequez has also taken the positive material identification course and is currently enrolled in the API 653 prep class. “Each time I take a class, my life changes,” he said. “I encourage my coworkers to take the classes as well.”

Joseph Jefferson III is new to the NDE industry. He and a friend were working in the cable television industry but decided

**Table 1 — ATTC Training Summary (known enrollments through 9/8/08)**

Course	Number Trained	Course Hours	Total Training Hours
Intro to Plant Safety & Inspection Technologies	65	40	2600
Visual Testing I/II	126	24	3024
Liquid Penetrant I/II	318	16	5088
Magnetic Particle Testing I/II	323	24	7752
RT I	27	40	1080
RT II	21	40	840
Radiography Film Interpretation	63	40	2520
UT I	179	40	7160
UT II	102	40	4080
UTT	197	16	3152
Ultrasonic Flaw Sizing/ Detection	38	40	1520
ET I	30	40	1200
ET II	29	40	1160
Basic Metallurgy	41	40	1640
Welding Inspection Technology	17	40	680
Certified Welding Inspector	33	48	1584
API 510	97	80	7760
API 570	106	48	5088
API 653	33	56	1848
Positive Materials Identification	97	8	776
Word I	30	8	240
Excel I	61	8	488
Technical Report Writing	64	24	1536
Windows for Desktop	25	8	200
Essentials of Leadership	124	8	992
Certified Expediter Training	24	10	240
Radiation Safety	70	40	2800
NDT Advanced Technologies	3	40	120
Alternating Current Field Measurement	0	40	0
Intro to Metrology	0	48	0
Blueprint Reading	0	24	0
Welding Procedures	0	40	0
Magnetic Flux Leakage	0	24	0
	2343(a)		67,168

(a) Note that the total number trained does not represent 2343 individual students. Trainees often take more than one class.

not to stay following a buyout of their company. He applied to WISco Enterprises, LP, as a project coordinator. After reviewing his résumé and noting his experience as an Army military intelligence technician, the company suggested he take the classes and become an inspector.

"I ended up as a CWI," he said. "I love the work. I learned a lot. I had no idea about the industry (before taking the classes). This is a career I want to stick with." Classes he took included Magnetic Particle Testing I and II, Ultrasonic Testing I and II, Intro to Plant Safety, and Metallurgy. He passed the AWS CWI test in January.

Jefferson cautioned that you need to be a self-starter and determined to apply yourself if you are to take these accelerated courses. "They present a lot of information at one time," he said. "Not everyone can handle it."

Joe Sanders participated in the program as both a student and as an employer. As area manager of Turner Industries, an NDE inspection company, Sanders runs and maintains such operations for his company as scheduling crews, lining up new work, and supervising existing work. He scheduled workers from his company to take the training and has received some new people through the program as well.

"I feel I've gotten a better skilled employee," he said. "That is true for both the experienced and inexperienced people. They are more knowledgeable now than they were before." He called the program a success and said taking the classes "resulted in advancement for those workers."

As a student, Sanders enrolled in the API 510 prep class. He called the experience "fantastic. I believe I would not have passed the test without taking the prep class." He feels the new

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certification enhances his qualifications, even though he plans to remain in his current position.

## What's Next

As mentioned previously, the grant expires December 31. Jones said the school is pleased with the results of the program and everyone involved thought they had learned a lot from the experience. It is her hope that some of the students who participated in the training will matriculate into San Jacinto's for-credit inspection program.

Hatler said the course curricula belongs to the APIIP, and he hopes to eventually establish a foundation to keep the curricula upgraded and available to other training programs. Because of the ATTC, "the (NDE) library we'll have will be the best in the world," he said. "We have a core of the best instructors. We now have a machine formed that is poised to continue this."❖