



CIA Inspection Inc.

Volume 5, Issue 1

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# The Profiler

A NEWSLETTER OF INFORMATION FOR COKE DRUM OPERATORS

## Contract Inspection Services

You are familiar with CIA Inspection (CIAI) as a world leader in providing consistent, reliable and repeatable coke drum inspection services using laser profiling and remote visual inspection techniques in the petrochemical industry world wide. CIAI has additional services that it can offer to support your next turnaround.



CIAI's Rowland Scarr—CSWIP

have over 50 man-years of inspection and testing experience in the petrochemical, power generation, and fabrication and construction industries.

As well as our unique understanding of coke drums and their failure modes, we are proposing to offer visual inspection services for turnaround work, new construction and scheduled equipment outages.

CIAI can also provide shop fabrication audits and general inspection for your company or project specifications and standards.

All our reporting is carried out in digital format using our own computer and image systems. However, we can report using in house inspection documentation methods as required.

We offer competitive pricing for this service and hope that you will find it attractive especially when you consider the unique experience that our inspectors have accumulated.



CIAI's Mark Anderson—API 510 & 653

Having performed over 350 site inspections of coking facilities around the world we have amassed a unique perspective on coke drums. Our inspection personnel have seen more sites, witnessed more operating techniques, and observed more drum conditions than anyone else.

CIAI would like to offer this expertise as a support service to your site during your next maintenance interval.

In addition to the unique skills gained through our 10-year exposure to cokers, our highly qualified staff inspectors are industry certified (API and CSWIP) and

### Upcoming Conferences of Interest

#### Bottom of the Barrel

April 8—10, 2003

Houston, TX

([www.coking.com](http://www.coking.com))

(CIA will be attending & speaking about coke drum "Repair, Replace or Retire?")

#### API

April 13—17, 2003

Seattle, WA

([www.api.org](http://www.api.org))

(CIA will be hosting a booth at the Monday night reception)

#### Universal Consulting Inc.

April 15—17, 2003

Galveston, TX

([www.cokingcokers.com](http://www.cokingcokers.com))

#### NPRA

#### Maintenance Conference

May 20—23, 2003

Salt Lake City, UT

([www.npradc.org](http://www.npradc.org))

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## CIA Manufactures the " Air Transportable Shelter "



*CIA staff demonstrate it's capabilities*

Custom Industrial Automation, the engineering parent of CIA Inspection, recently shipped another of its unique

"air transportable shelters" to a major, US based defense contractor. This patented design met all of the customer requirements and was shipped on time.

Similar to the portable control rooms used by CIAI, this innovative container design has an extendible roof which allows the container to meet the 62 inch height requirement during shipping and then raises to 7 ft. 6 inches in the field.

Features include:

- air transportable shipping configuration ;

- convenient lifting points makes container ideal for trucking and handling with roller beds, fork lifts or cranes;
- large payload capacity - 4000 lbs.;
- weather tight, secure enclosure complete with windows and locking doors ;
- electrical distribution panel providing HVAC, lighting and power outlets;
- heated & air-conditioned provides a comfortable working environment.

For more information regarding this product and other unique product innovations, please visit the website at [www.cia-engineering.com](http://www.cia-engineering.com).

## " Coking Corner " Coker Maintenance—Repair, Replace, Retire?

CIA Inspection has performed its laser and remote visual inspection service on over 350 coke drums worldwide. About 1/3 of the coke drums in our database are nearing end of life and many sites have to make the decision to repair, replace or retire.

The regular use of CIAI's profiling and remote visual inspection service provides a cost-effective means of identifying in advance, trends that could ultimately lead to failures.

Comparing current scan data with previously collected data helps document the changes in the vessels as they continue to age. CIAI's "Drumview" software makes this comparison and trending easy. As part of our service, we note the trends and highlight those areas that have exhibited the most growth.

This information can then be used to set up a remedial inspection program to externally monitor the suspect areas. This technique has proven very effective in focusing the attention of the inspection and operations personnel on failure prone areas.

Using our extensive database that documents coke drum distortion against age, CIAI provides information on how a customer's drums compare with the rest of the industry.

CIAI and its alliance partners can recommend further actions that can be im-

plemented to manage the rate of deterioration in the drum in an effort to extend the life of the asset.

One of CIAI's clients had to make a replacement decision on a four drum unit that was over 30 years old. The drums were exhibiting significant cracking and had been through extensive repairs over the last 10 years.



The site chose to use Chicago Bridge & Iron's "vertical plate" technology to replace the drums from tangent to tangent. The plate was manufactured in two sections—40

feet and 26 feet with only one horizontal weld where the two plates were joined. Eight vertical plates were welded together to form the drum.

The site performed a baseline scan of their "new" drums before they went into service. One year after running the drums, the site performed a follow-up



scan and found the drums to be near as-built condition as expected.

The installation of these coke drums was quite unique and as such, the site has provided pictures to show how the drums were installed. We have included a few in this article. For more information on the vertical plate technology, please contact Coby Stewart with CBI at 281-765-3036.



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