

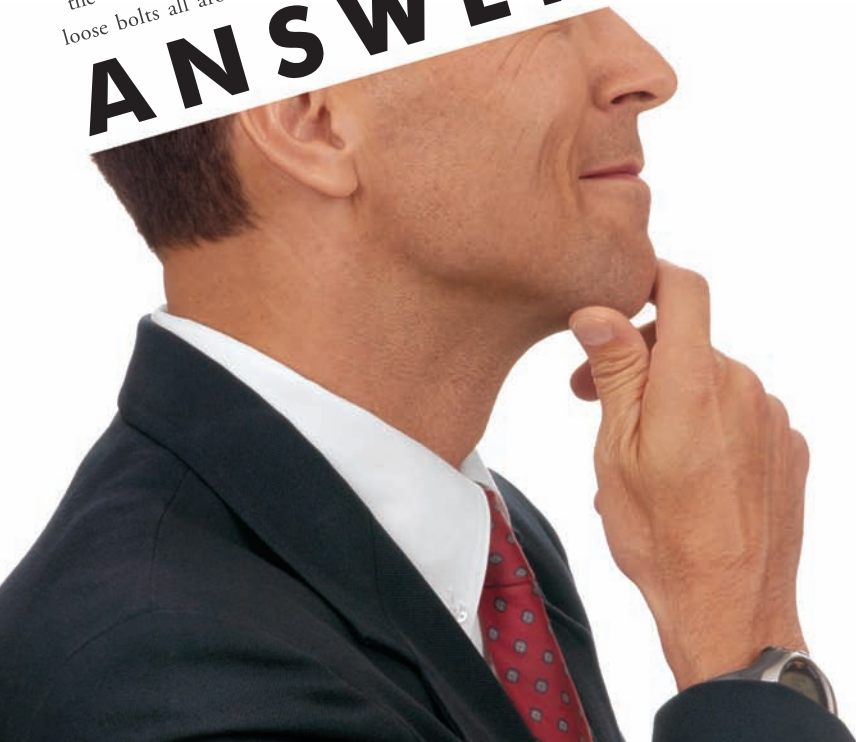


**The Answer is Everything**



Everyone on the scene could see the problem was the cable breaking. Our client wanted to know why it broke. We took a segment of the cable back to the lab while the rest of the team inspected the crane cable housing. There were loose bolts all around the flange and warping on the...

**ANSWER**



Problems come and go. Technologies change. What stays the same is the approach problem solvers take to find an answer. The methodical mind of the engineer is the hallmark of Packer Engineering's expert staff. Our scientists, technicians, and research experts solve problems and answer questions for clients in every major discipline. Packer understands when your question needs a solution, the answer is everything. We understand a wrong answer could cost you millions or put lives in danger.

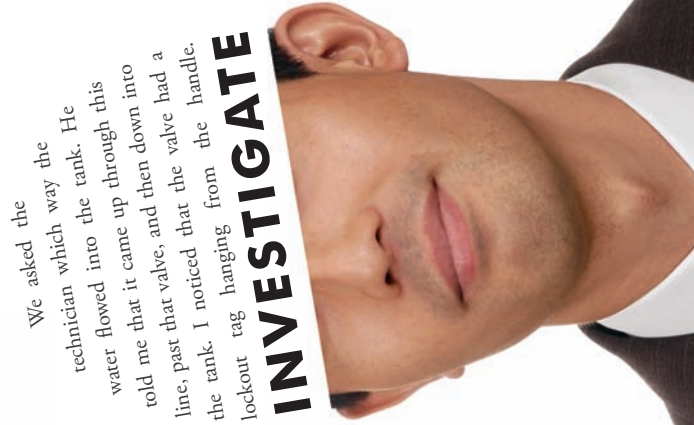
The bus fire was caused by overheated electrical components. It had snowed hard on the day of the fire, which made me think that the radiator grill may have been packed with snow. If true, this could be the reason for the...

**HYPOTHESIS**



We asked the technician which way the water flowed into the tank. He told me that it came up through this line, past that valve, and then down into the tank. I noticed that the valve had a lockout tag hanging from the handle.

**INVESTIGATE**



## Answers for Insurance & Litigation

When investigating insurance claims, Packer Engineering provides a wide range of services which enable insurers to validate claims, assess damages, and effectively manage losses.

Should clients require litigation support, we offer investigative services applying the Scientific Method that provides essential information to make a decision on the best course of action. We also assist in bringing the facts to light with the necessary courtroom exhibits and expert testimony.



Suspension failure results in a fatal vehicle rollover



Condensation caused by lack of insulation along exterior wall



Chemical warehouse roof collapsed due to caustic fumes in the process tanks



# Answers for Industry

When the Industrial marketplace requires engineering, scientific, and technical expertise, they turn to Packer Engineering.

We apply analytical techniques and “real-time” problem-solving methods when performing failure analysis, product and system design, and performance evaluations.



Testing for Federal Motor Vehicle Safety Standard compliance



Temporary fix of an essential deaerator tank keeps a paper mill running until the replacement vessel can be delivered



Validation for standardization on cookware testing



# Answers for Research & Development

With on-site laboratories and testing facilities, we use our resources for the advancement and development of technological products and processes.

Our theoretical and applied based knowledge enables clients to enhance their positions within the global market place.

Our electrical

and material science engineers

identified that an essential contact in the

component only held intermittently. When-

ever they jarred the vehicle, faulty manufacturing

made the circuit susceptible to opening and randomly

deploying the driver-side airbag. When we looked...

## ASSESSMENT

The only way

to know how the part would

perform was to expose the component

to the same conditions it would face in the

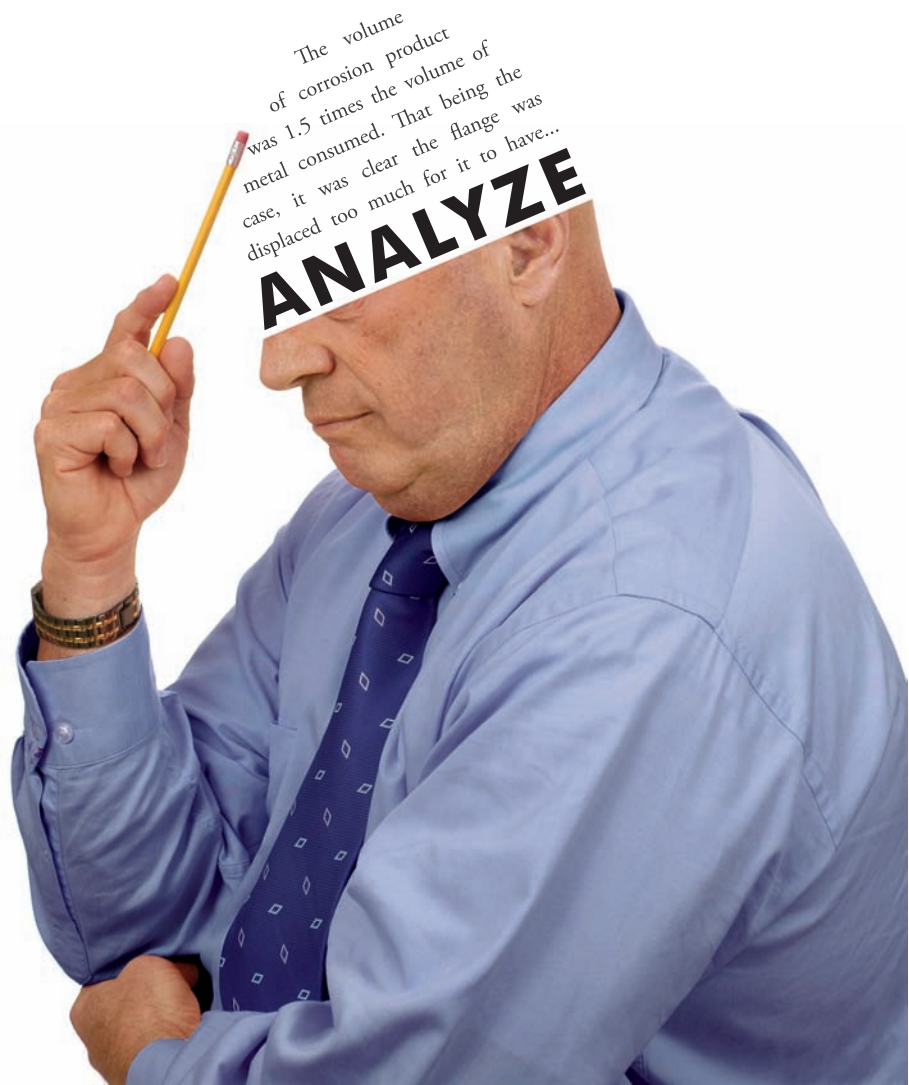
field. This required us to create an automated

control system that both opened and closed the

door as well as monitor all the stress points...

## TESTING





The volume of corrosion product was 1.5 times the volume of metal consumed. That being the case, it was clear the flange was displaced too much for it to have...

**ANALYZE**

**In 1969, America  
sent men to the moon  
using slide rules.**

**How?**

**IDENTIFY HYPOTHESIZE INVESTIGATE ASSESS TEST ANALYZE ANSWER**

**With the brains of Engineers.**

## **Packer's core services**

**Accident Investigation  
& Reconstruction**

**Failure Analysis**

**Origin & Cause Investigations**

**Research & Development**

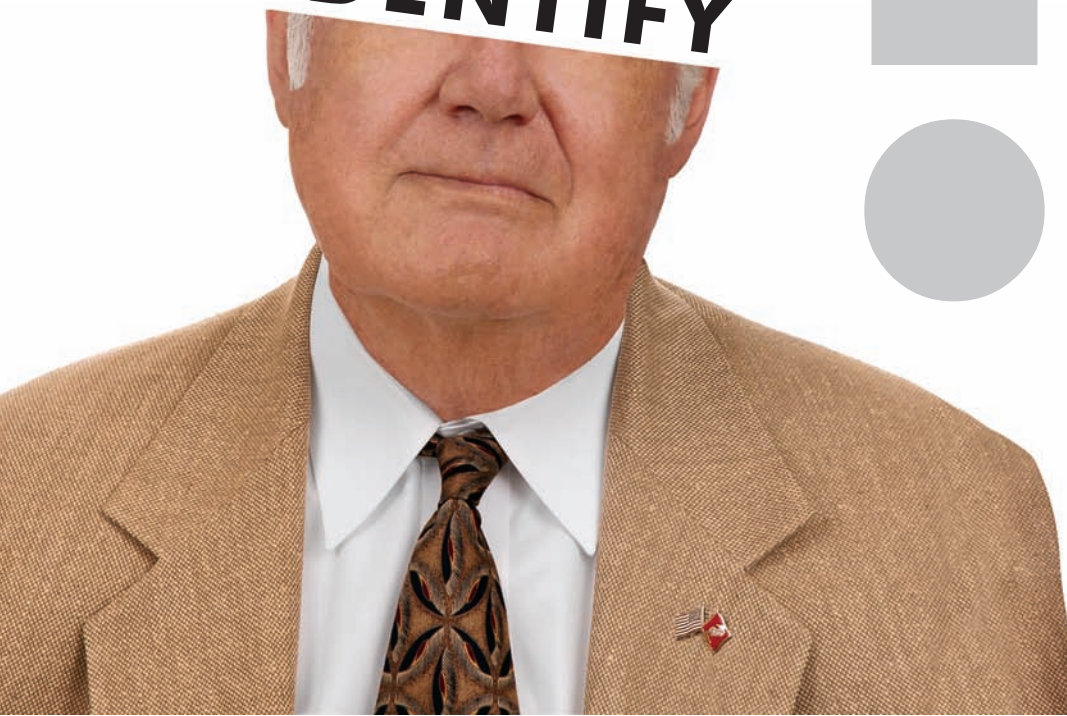
**Design Analysis**

**Custom Testing**

**Intellectual Property**

*There were  
three explosions in the plant.  
The operator logged in the warning  
indicators two hours previous to the failure.  
The main chemical manufactured at the facility is  
aluminum powder, a highly volatile compound even  
under the most controlled circumstances...*

**IDENTIFY**



After the questions have been asked, the conjectures made, the research, experiments, and analyses completed, you're left with a conclusion.

**Be confident it's the right one.**



**Engineers with Answers®**