



The AC Mitigation PowerTool ROI Guide

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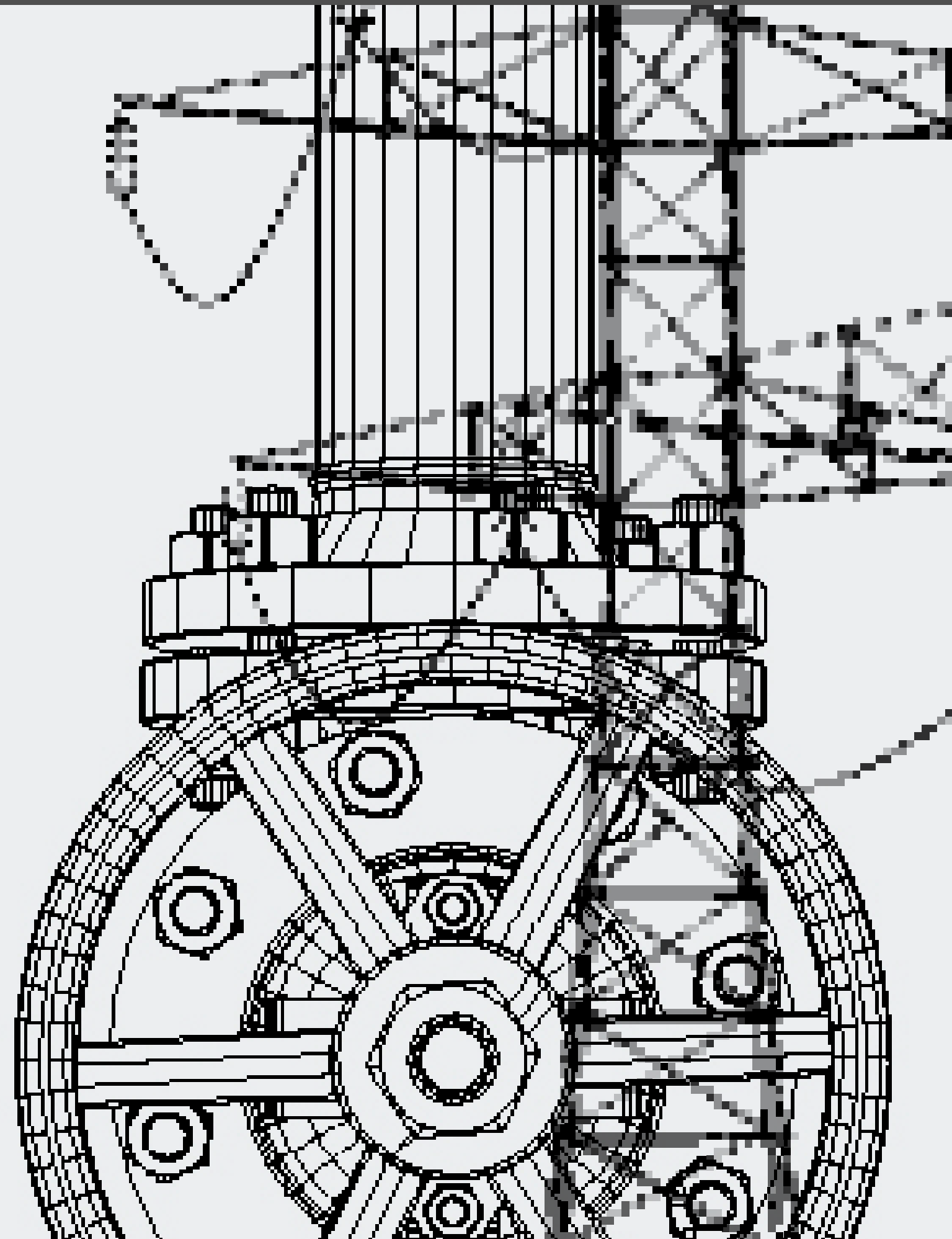
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Who Needs This eBook?

Anyone in the pipeline industry that needs to design, build, or maintain pipeline assets needs to have the proper tools at their fingertips to identify AC corrosion and shock hazards risks. Armed with the proper tools, you can confidently go to managers and decision-makers with real fact-based answers to protect pipeline assets and pipeline employees from shock hazards. The AC Mitigation PowerTool Return on Investment Guide provides those facts. In addition, it illustrates them with examples of how the AC Mitigation PowerTool (AC-PT) provides savings.

Mitigating high voltage power line-induced AC corrosion remains a leading challenge for pipeline operations with several options to consider.

Dimensions That Matter

- Model and Engine (PRCI) integrity
- Man-hours required for remodeling
- Profit margins for services
- Ability to win bids
- Enable operators to perform in-house studies

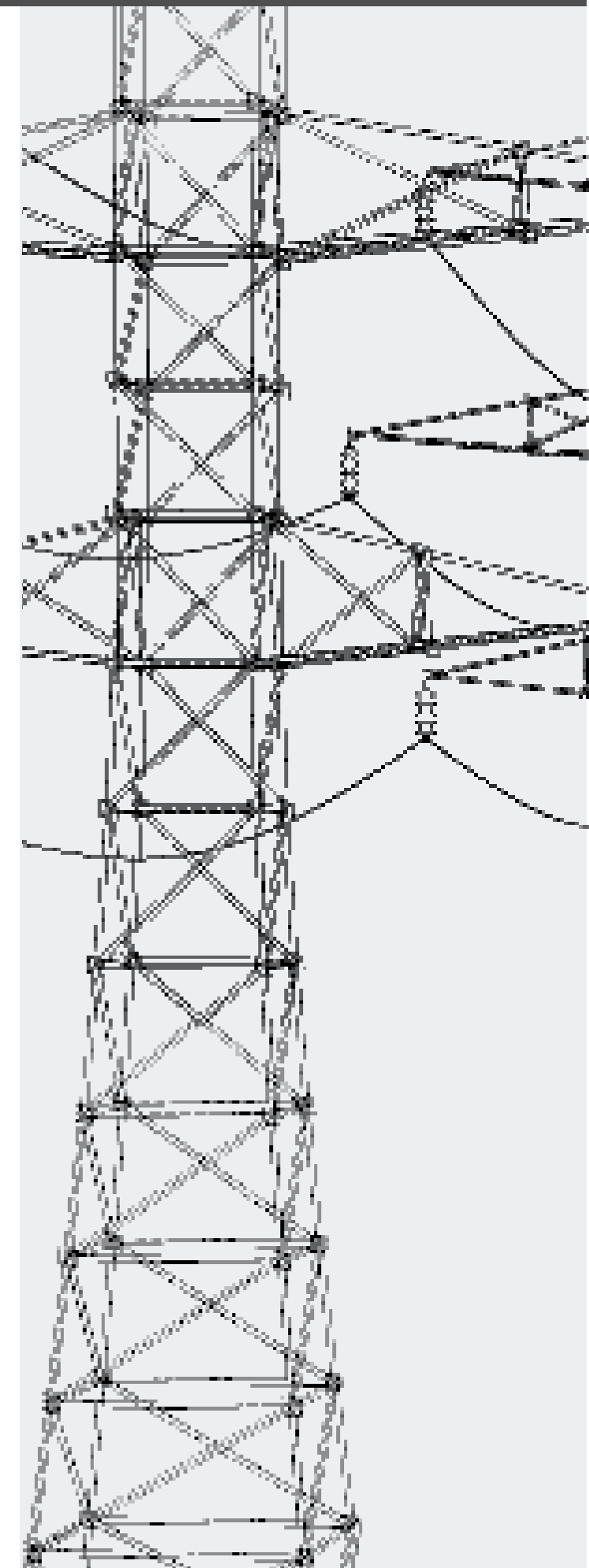
“Anyone in the pipeline industry that needs to design, build, or maintain pipeline assets needs to have the proper tools at their fingertips...”



“Armed with the proper tools, you can confidently go to managers and decision-makers with real fact-based answers...”

Benefits that differentiate AC-PT from the competition

- **Win more bids** by lowering costs to clients
- **Lower costs** to perform services resulting in increased profit margins
- **Accelerate project schedules** by performing 50% more projects with the same staffing levels
- **Reduce OpEx** with time savings gained through modeling efficiency



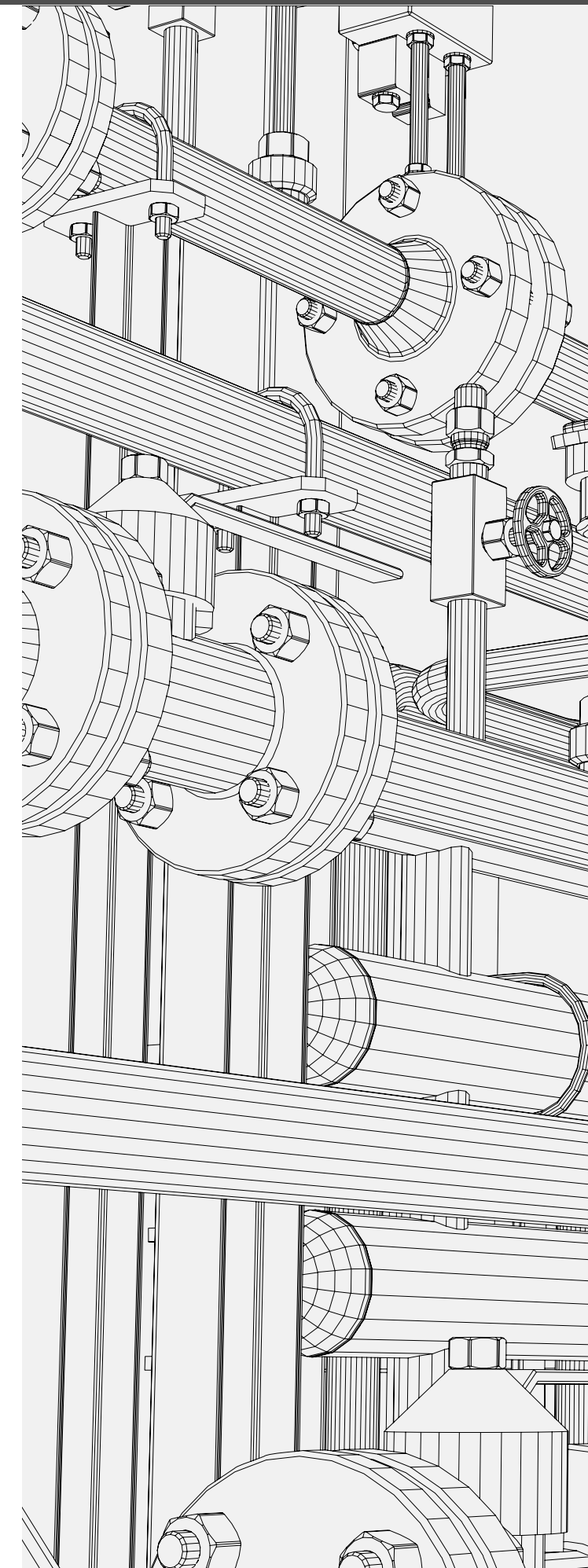
AC-PT Return on Investment Examples

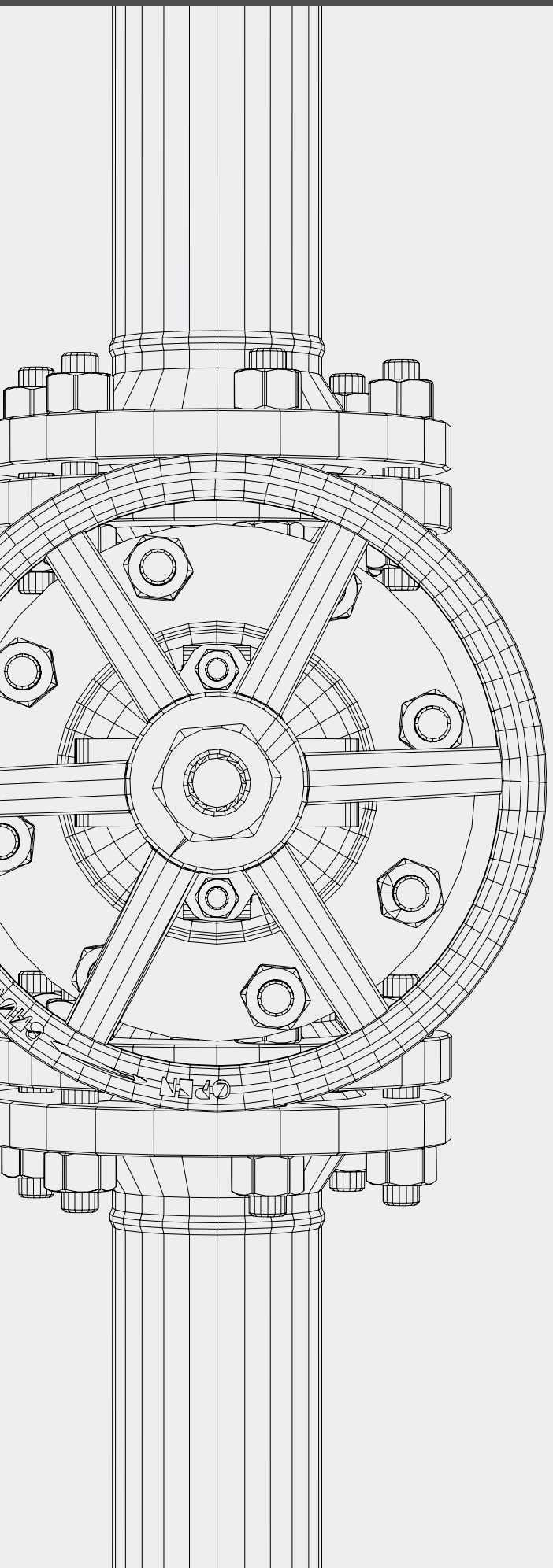
AC-PT gives experienced AC/CP designers the tools they need to mitigate any situation for a fraction of the cost (labor and software). Conservatively, it is 75% faster than competing solutions and involves far less training to master the program.

In addition, Technical Toolboxes provides consulting with subject matter experts and technical training classes. One of our customers recently remarked that they learned more in two hours with experts from Technical Toolboxes than they did in the two previous years by contracting engineering services out to vendors.

Example: AC-PT Compared to In-house solutions

A recent case study of one customer's experience switching to AC-PT from an in-house solution provided a remarkable illustration of the potential for savings. The engineering firm did not realize that they were spending \$150 per hour for a third-party contractor to enter QC and probe for asset data. AC-PT saved them \$22,500 worth of manual data entry and distance and angle calculations for one AC mitigation study alone. This represented a 150% ROI and program paid for itself in two weeks!





Example: AC-PT Compared to Competitors

While AC corrosion-affected pipeline lengths are typically more than fifty miles in length, the solution offered by leading competitors only model pipeline-to-powerline lengths of less than thirty-five miles. Additionally, they require a commitment to pay for training: A mandatory five-day course of \$10K per user due to the complexity of the solution. And an additional week of learning to receive level 2 master of their program (this involves a cost as well). A very steep learning curve that takes most engineers over a year to master other modeling software.

In total, the leading alternative solution costs around \$30,000 per user, whereas Technical Toolboxes implements AC-PT for less than half of that price. Moreover, the AC-PT program is much easier to learn and use to its full capabilities, typically taking end-users just a few hours of training to master it. Engineers can perform initial modeling 50% faster, iterate mitigation scenarios in 2-3 hours vs. 2-3 days, thus providing a lower cost to clients that facilitates winning more bids.

“...the AC-PT program is much easier to learn and use to its full capabilities, typically taking end-users just a few hours of training to master it.”



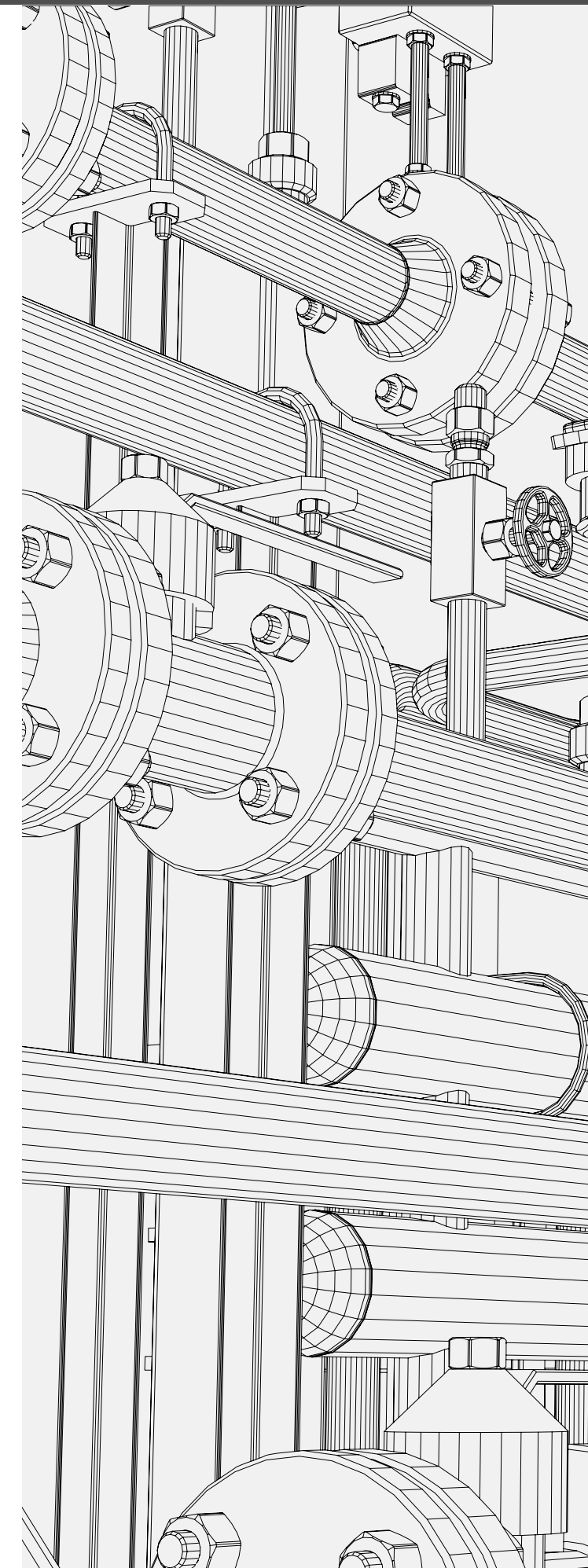
How AC-PT Achieves Superior ROI

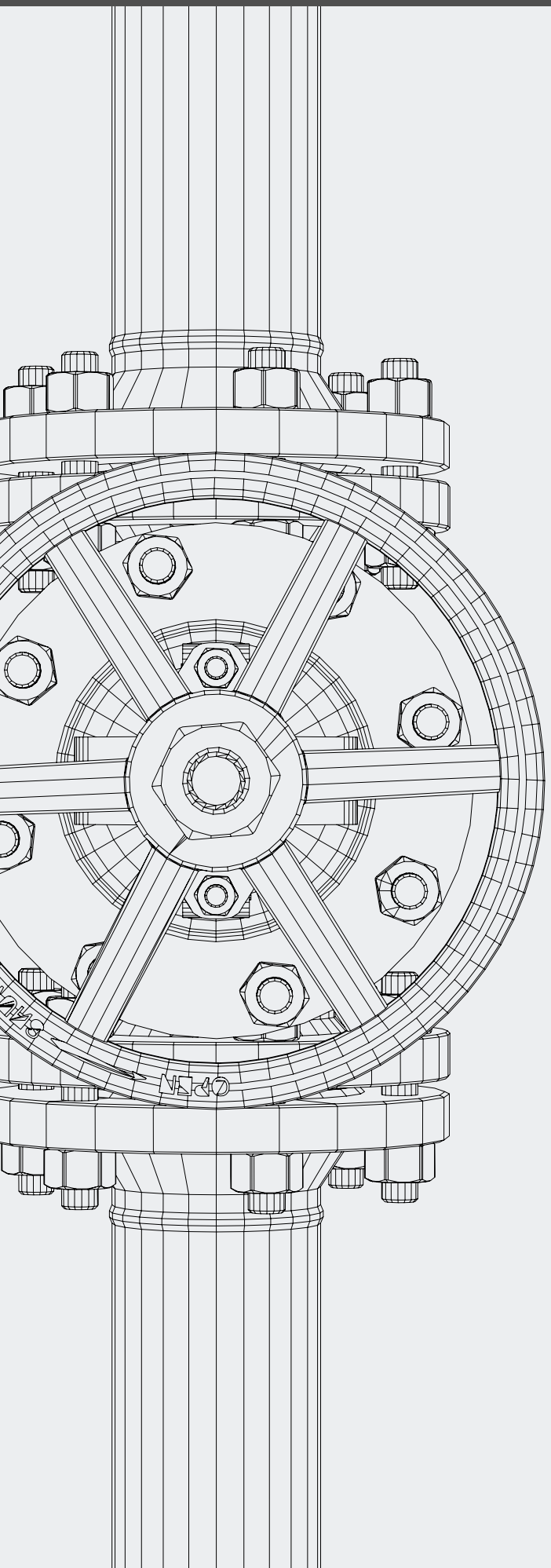
AC-PT leverages PRCI AC Mitigation Toolbox, which is the industry's proven gold standard computational engine. The software was built by pipeline engineers for pipeline engineers. Where other solutions only estimate depth of cover and other characteristics, AC-PT automates data inputs and integrates ArcGIS inputs. As a result, it brings together vast quantities of map and asset data such as variable depth of cover, multiple soil layers and resistivities, and arc-step and touch.

With AC-PT, you have the power to analyze as many pipes and power lines simultaneously as occur in real-world configurations without any limit on mileage of pipe, number of pipelines, or number of electrical power lines. In addition, AC-PT produces detailed maps of the standoff distance for electrical towers that run parallel to pipeline assets for hundreds of miles.

In contrast, the solutions offered by competing brands were designed by electrical engineers for electrical power systems. Because their competing solutions are not primarily intended for the pipeline sector. They do not account for variable depth of cover or horizontal directional drilling cases or long pipeline segments beyond 50 miles in length, which causes greater risk.

From the perspective of the pipeline sector, AC-PT provides a more comprehensive solution for around half the price. Furthermore, combined with Technical Toolboxes' in-house CP and Pipeline Engineering subject matter expertise, training and onboarding onto the program is a seamless, enjoyable process. Triple digit ROI's can be easily realized by incorporating AC-PT into your everyday workflows.





The Technical Toolboxes Knowledge Base

Technical Toolboxes provides knowledge-based management resources and software. The company's mission focuses on delivering calculation and analysis tools that multiply pipeline engineering ROI. Since the company launched in the mid-1990s, it has had a close working relationship with the Pipeline Research Council International (PRCI) and is an authorized PRCI software and resources reseller.

The expertise of Technical Toolboxes includes the best minds in the business for AC Mitigation and pipeline integrity. We help pipeline engineering organizations take calculations and analyses in-house, eliminating the high-priced service fees of vendors and consultants.

Technical Toolboxes provides thought leadership and knowledge resources for oil and gas, consulting services for pipeline studies, subject matter experts, and training for professional development within the industry. Training events range from an hour to multi-day. They include a comprehensive range of topics, such as pipeline integrity and risk management, HDD, pressure test planning, AC mitigation, coatings, and regulatory changes such as the PHMSA Mega Rule.

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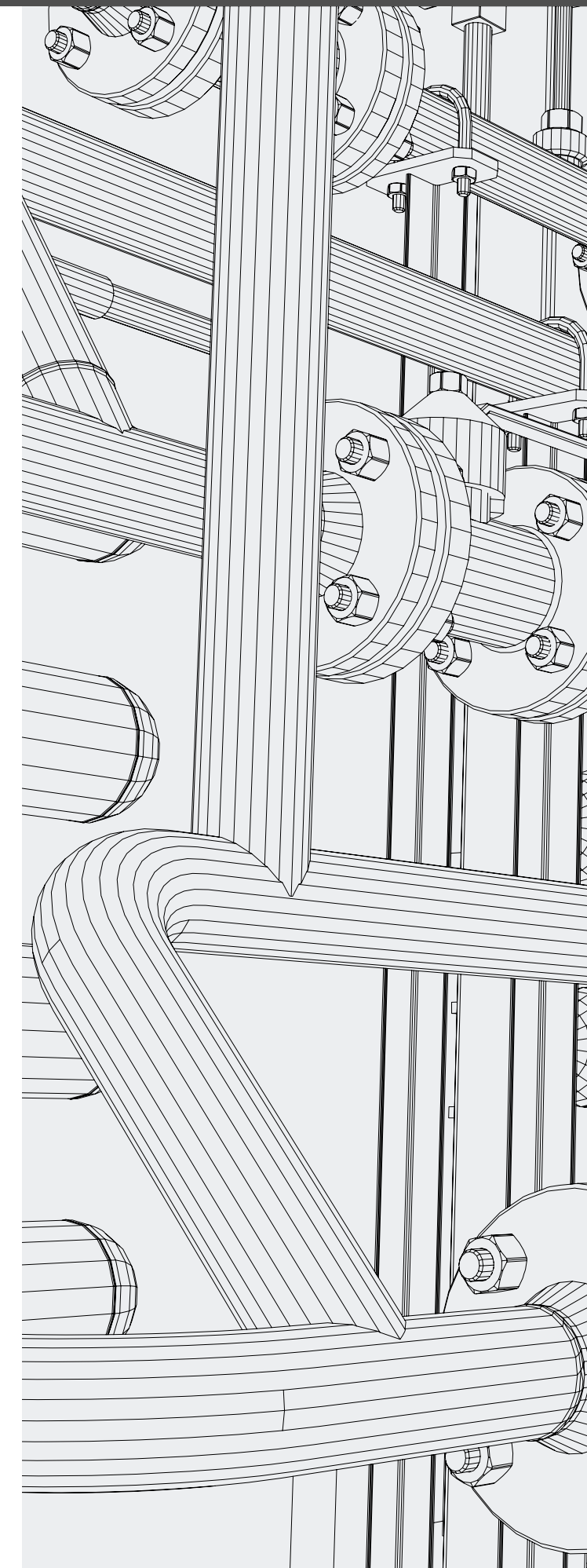


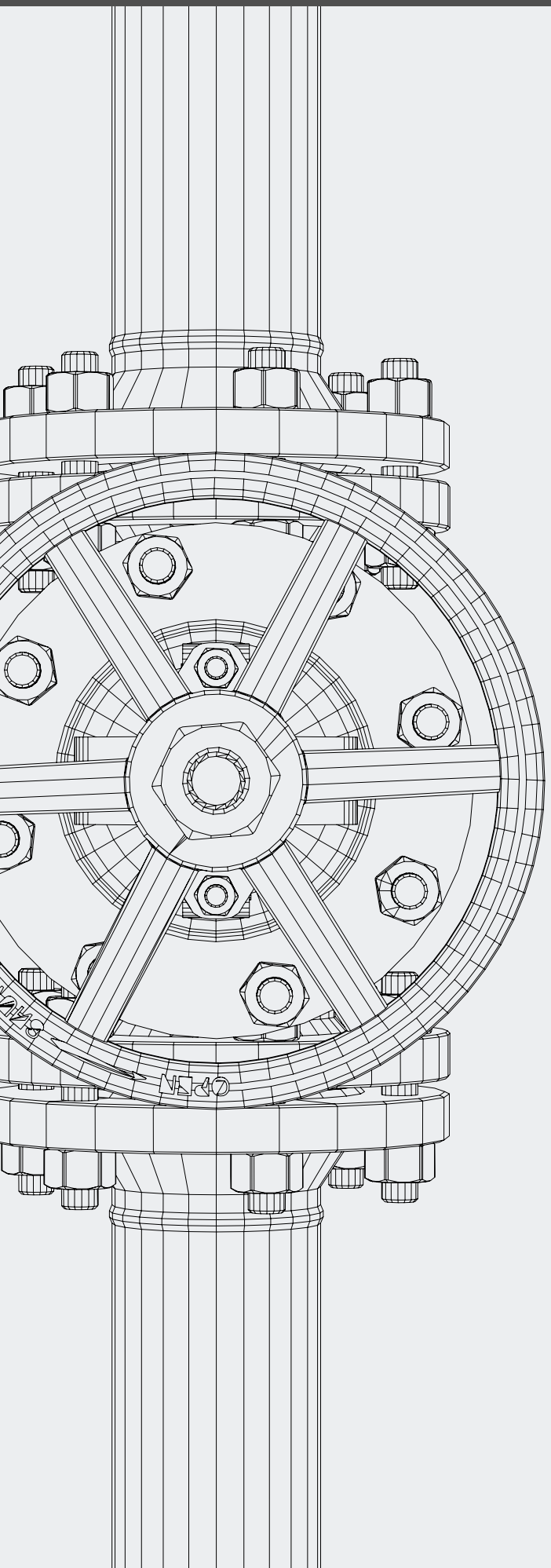
“Increased productivity and longer lifecycles maximize the return on investment in a few small projects.”

Conclusions

AC mitigation and modeling are necessary to preserve assets, meet regulations, and extend the pipeline lifecycle. For the many pipelines that share right-of-ways with power lines, the battle to minimize the impact of exposure to high-voltage AC is vital in the fight against AC corrosion and employee safety. Well-engineered AC Mitigation calculations and analyses can optimize the amount of material required, directly impacting CapEx and OpEx budgets. Increased productivity and longer lifecycles maximize the return on investment in a few small projects.

The AC Mitigation PowerTool from Technical Toolboxes brings your calculations in-house, saving expense by reducing third-party costs. It preserves productivity and maximizes revenue while extending the lifecycle of valuable pipeline assets. Perhaps most notably, the AC-PT does all of this while requiring half the investment of competing products. Talk to Technical Toolboxes to find out how we can improve the AC mitigation ROI for your company.



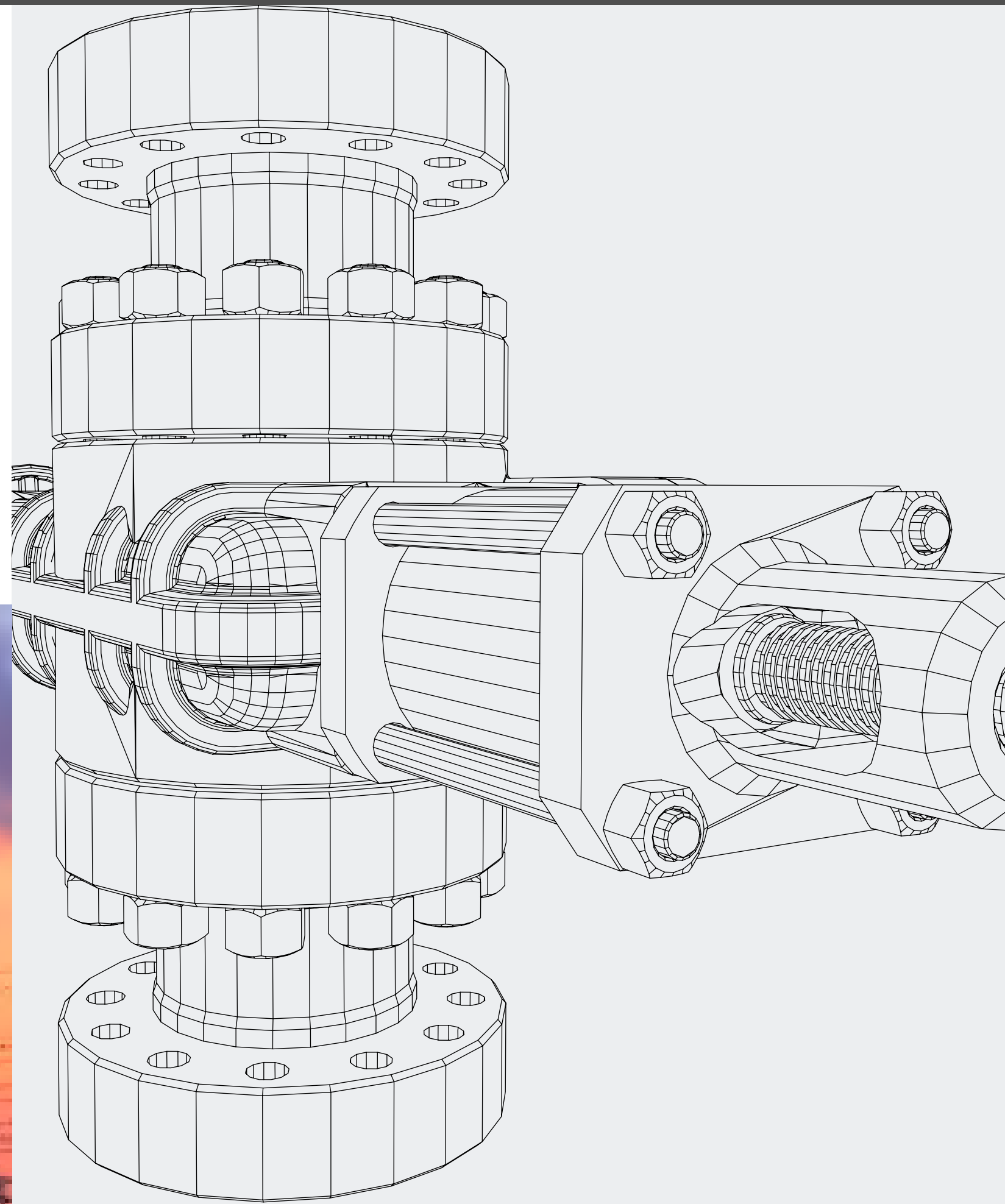


AC Mitigation PowerTool in Summary

- **Extends** the PRCI AC Mitigation Toolbox computation engine
- **Integrates** ArcGIS geospatial data
- **Saves valuable engineering time** in AC mitigation analysis and design optimization
- **Automates calculations** for unlimited power lines and pipes
- **Preserves productivity** and maximizes revenue
- **Extends the lifecycle** of valuable pipeline assets
- **Requires half the investment** of lesser competing products
- **Integrates** with other integrity-related tools from Technical Toolboxes

“The AC Mitigation PowerTool from Technical Toolboxes brings your calculations in-house, saving expense by reducing third-party costs.”







Technical Toolboxes
10370 Richmond Ave, Suite 1150
Houston, TX 77042, USA

Toll Free: (866) 866-6766
Phone: (713) 630-0505
Fax: (713) 630-0560

info@technicaltoolboxes.com
www.technicaltoolboxes.com

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PRCI Thermal Analysis

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API Inspectors Toolbox
Crossings Workflow
ECDA & Remaining Life
Encroachment PowerTool
HDD PowerTool
Hydrotest PowerTool
Investigative Dig PowerTool
Pipeline Toolbox
RSTRENG+

About Technical Toolboxes

Technical Toolboxes is a leading provider of integrated desktop and cloud-based pipeline software, online resources, and specialized training for pipeline engineering professionals worldwide. We deliver oil and gas industry training courses covering a breadth of topics with industry-recognized instructors. Compare the performance that Technical Toolboxes technology and training can make in pipeline engineering performance and you'll see a measurable difference. Our fit-for-purpose pipeline engineering software platform will help you reduce risk, lower the total cost of operations, and accelerate project schedules. Hundreds of companies rely on our certified, industry-standard technology to enhance their pipeline engineering performance.