

A photograph of two construction workers on a site. The worker in the foreground is wearing a yellow hard hat and a high-visibility yellow safety vest. The worker in the background is wearing a blue hard hat and an orange safety vest, and is holding a tablet or clipboard. They are both looking at the device. The background shows a construction site with scaffolding and a clear blue sky.

# API 653 Reporting And The Pipeline HUB Data Integration Environment

# Table of Contents

API Inspectors Toolbox Enterprise Modules

API Inspection Challenges

The API Toolbox Advantage

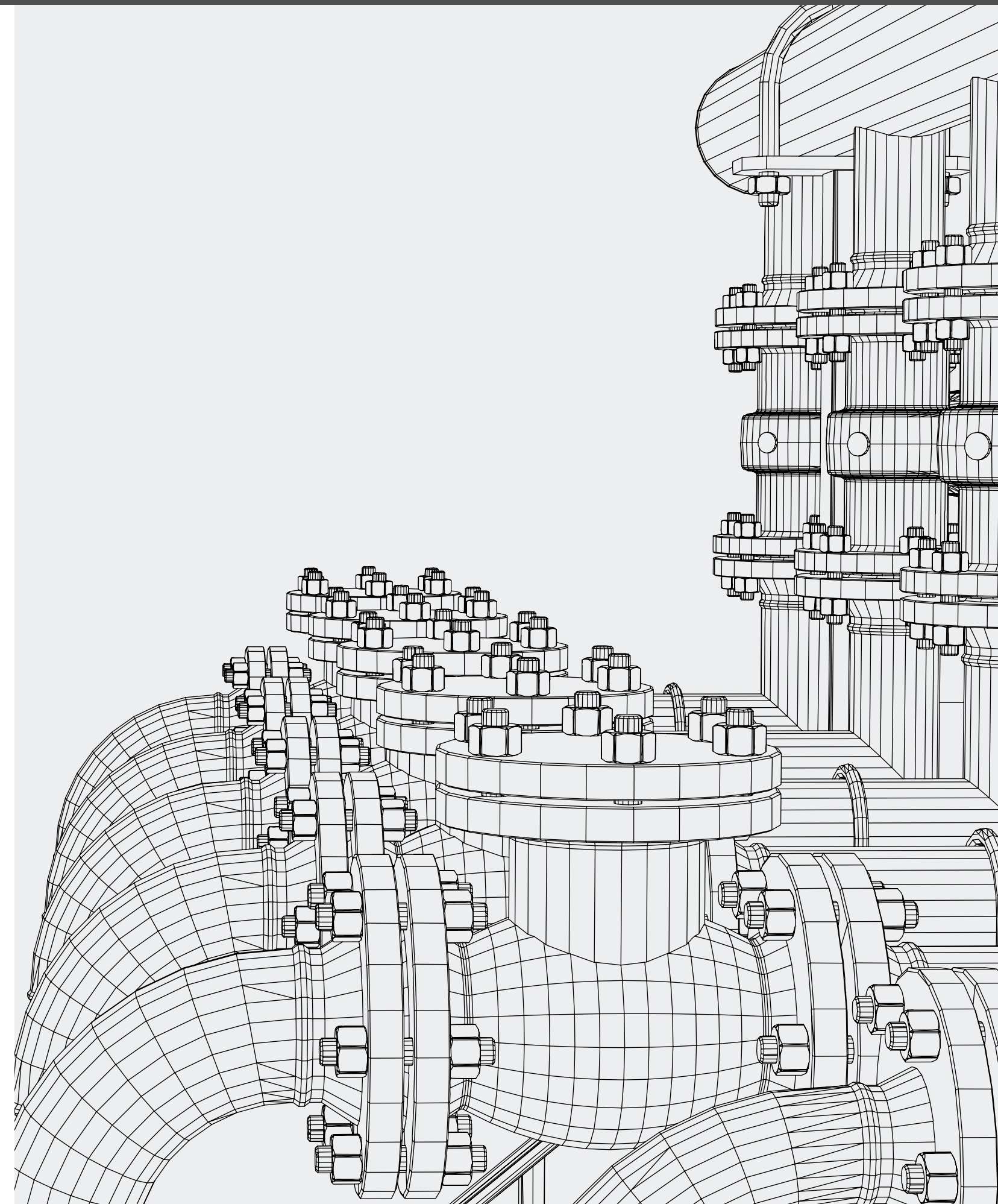
The API 653 AST Module

Looking Forward

Conclusions

Your Next Step

Jeff Walling





## API Inspectors Toolbox Enterprise Modules

The API Inspectors Toolbox Enterprise Edition from Technical Toolboxes was conceived and built to solve all the issues and frustrations experienced by Inspectors. It's a single-source repository for technical information and a digital filing cabinet for the information that API-certified inspectors gather throughout their careers.

The modules of the API Toolbox (APITB) are a singular source for inspection and technical information. It supports all of the activities involved in API 570, 510, and 653 inspections, analysis, and reporting. With it, you save time while delivering reports to the highest standards. So the information you need to be productive is always up-to-date and accessible.

In the latest release, the evolution toward the goal of total digital integration continues. Technical Toolboxes now offers the module for Aboveground Storage Tank (AST) inspections and reporting as part of the Integrated Data Environment of the Pipeline HUB (HUB<sup>PL</sup>).

**“The modules of the API Toolbox (APITB) are a singular source for inspection and technical information.”**

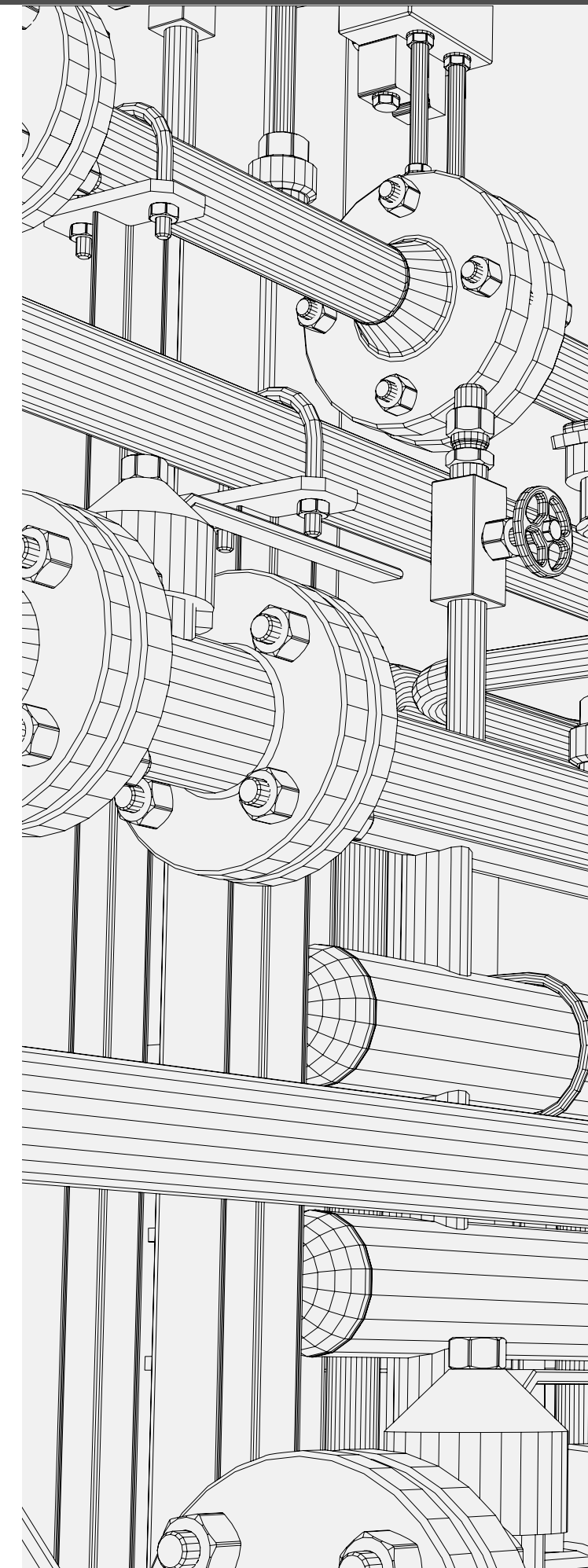


# API Inspection Challenges

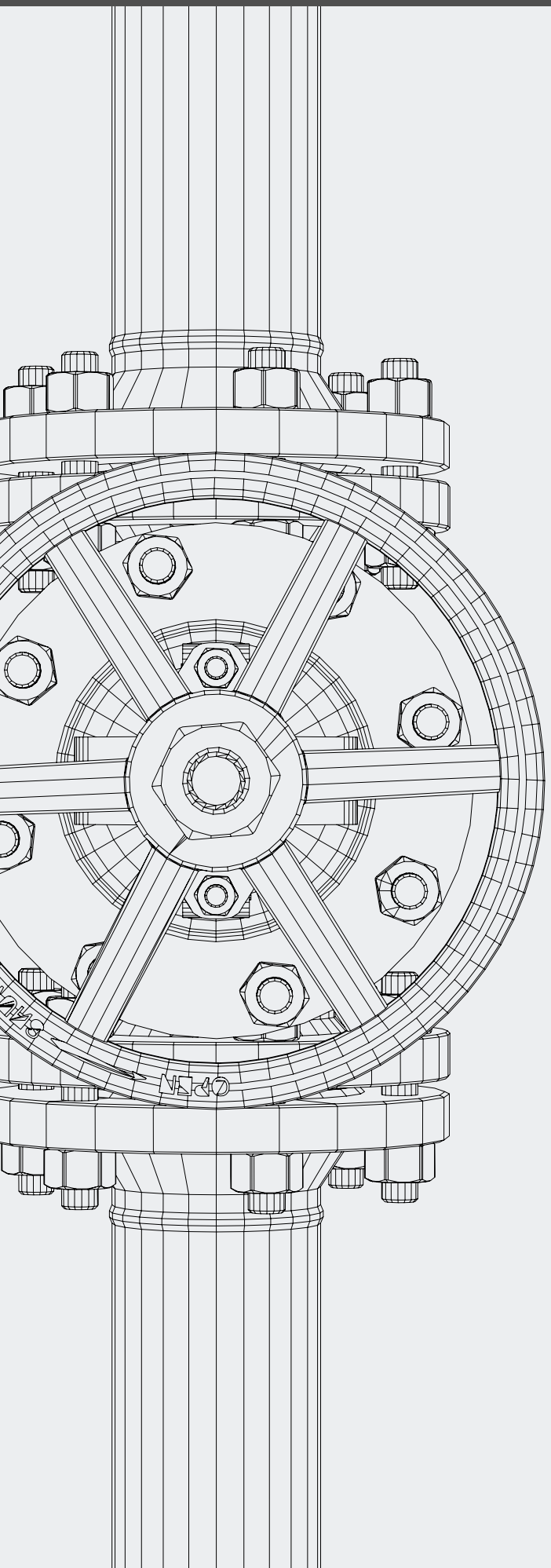
Before APITB was available, inspectors had no rigorous and rationally organized source for the many reference details required for API reporting. Jeff Walling was an established senior inspector in the industry, with a sideline in software writing. He had experienced all of the frustrations of his peers.

At one point, he thought his career had suffered a devastating setback when he misplaced the notebook of references that he had painstakingly compiled over many years. So he decided to provide the solution and began to write the program one small piece at a time. In need of a development shop as a collaborator, Mr. Walling teamed up with Technical Toolboxes. The company has expanded it into the industry-leading inspection essential that it is today.

The APITB assists inspectors under pressure to deliver reports quickly and accurately. The user-interface organizes the tools you need with selection buttons, tabulated text windows, and scroll systems to instantly call up information.







The specifications for the most commonly referenced standards are at your fingertips for materials, Pipe Standards, Flanged Components, and more. APITB solves researching and information-gathering challenges, eliminating the hours spent searching through PC files, the internet, or hard copy libraries for commonly referenced data and calculations.

You always have an exhaustive selection of calculations for Aboveground Storage Tanks, Pressure Vessels, and Piping at hand.

Reports compiled and published with APITB provide traceable, verifiable, and complete records and case histories. The final documents satisfy OSHA/PSM audits and prevent costly fines. The filing cabinet functionality offers the scope to develop Repair and Modification Specs in response to changing environments and company practices.

**“Reports compiled and published with APITB provide traceable, verifiable, and complete records and case histories.”**

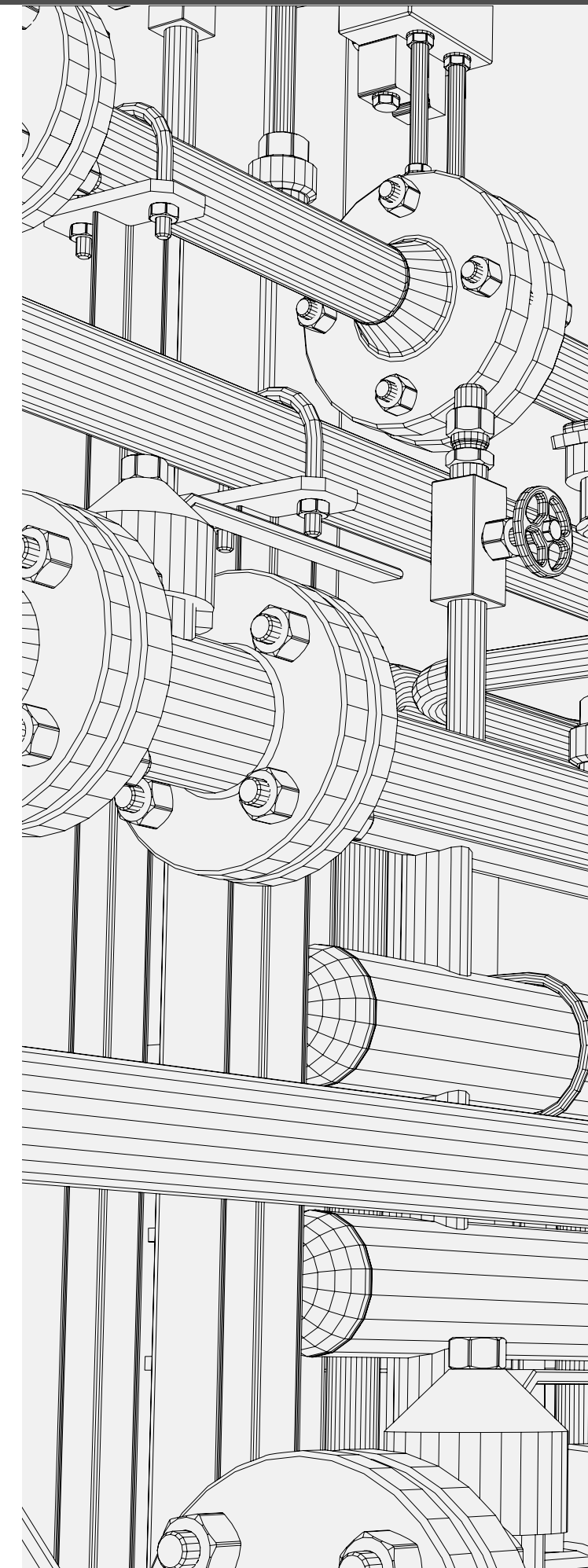


# The API 653 AST Module

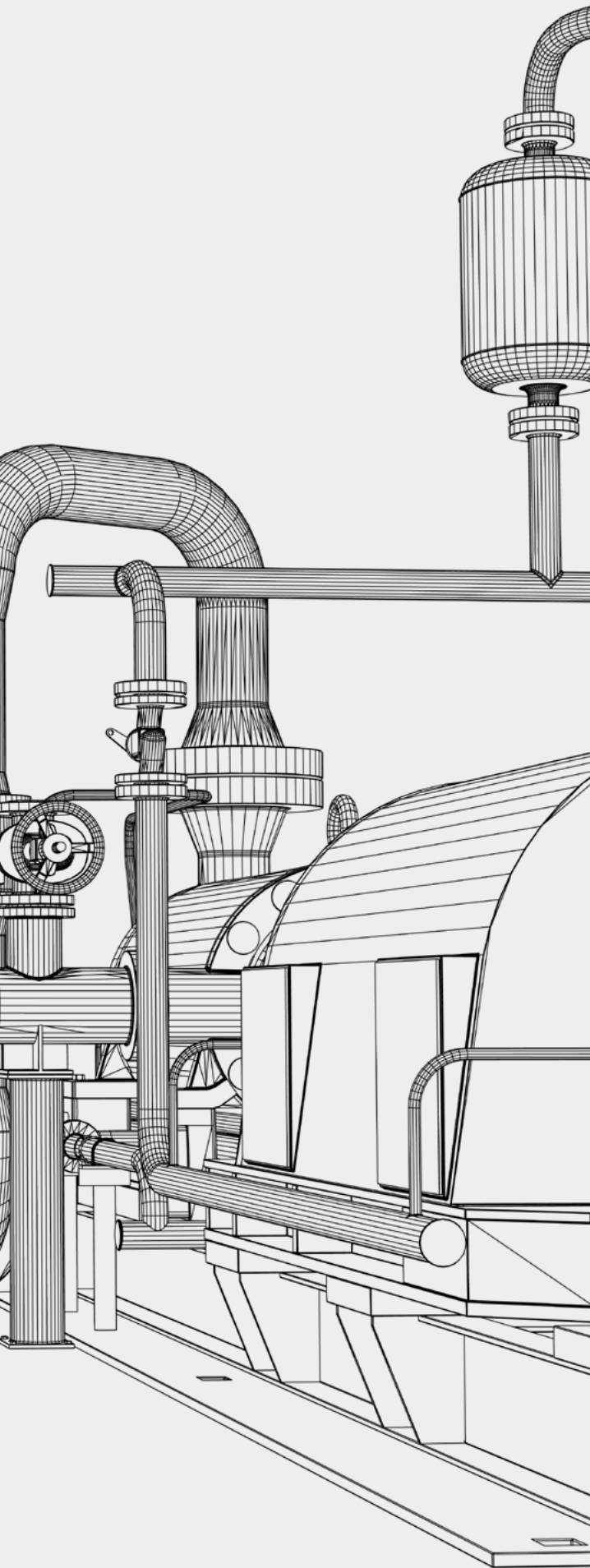
The Pipeline HUB from Technical Toolboxes is an Integrated Data Environment for engineers and inspectors. The latest HUB<sup>PL</sup> release includes the API 653 module for AST inspection reporting as a fully-functioning integration. All the calculations that inspectors use for AST inspections and the report builder to publish the final report.

The desktop canvas environment of the HUB<sup>PL</sup> displays the module page, with menu selection, interactive form, and Hierarchical Navigation. Its framework replaces paper codebooks, digital files, and reference websites with uniform information sources. Users can store and access inspection data, reference material, and code on one desktop canvas and combine with other tools and workflows. It gives a rational order to the obscure and difficult to replace references that inspectors scrape together.

Tabulated windows provide access to the subject matter of interest (code bits). The API-653 Module breaks the code guidelines down to the associated component (Shell Courses, Tank Bottoms, Fixed Roofs, etc.) and then to sub-pages for Design, Inspection, and Repair of that component.







Click on the buttons on the bottom for technical information and work pages such as Repair Specs, Inspection Forms, Hydro Testing, Report Builder, et cetera. The Repair Specs button lists repair specs and what situations you might need them. Choose the repair procedure of interest from the pop-up menu.

APITB for ASTs on the HUB<sup>PL</sup> is a comprehensive solution for inspectors and companies that perform API inspection reporting. Having the data, codes, calculations, and references in one platform slash the time to research, compile, and publish reports by 90%. The Report Builder merges all of the documentation quickly, seamlessly, and cost-effectively.

**“Having the data, codes, calculations, and references in one platform slash the time to research, compile, and publish reports by 90%.”**



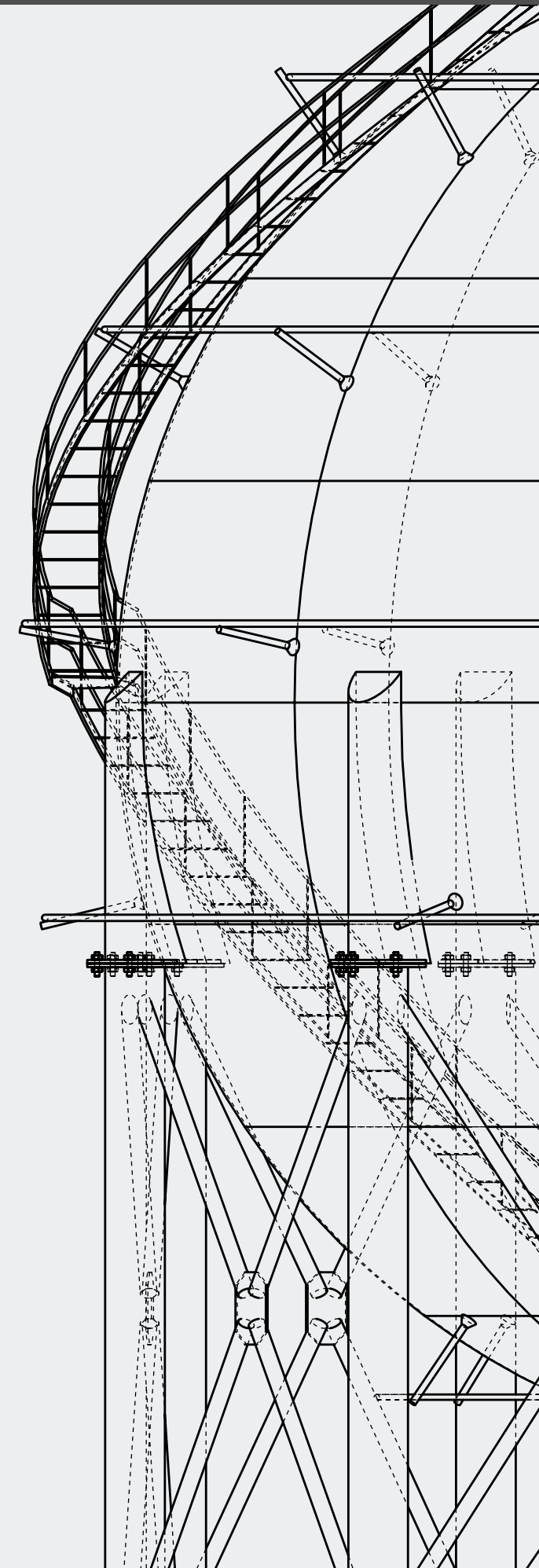


“Only the smartest, most efficient teams that adapt to the new reality are likely to survive.”

## Looking Forward

Looking forward, efficiency, and competitiveness will remain paramount for code-regulated industries. Competition, the diminishing returns of conventional practices, and economic adversity compel companies in all industry sectors to push hard to find new efficiencies. Oil and gas and related petrochemical industries face destabilizing price-volatility due to many factors.

While Covid-19 will pass eventually, many uncertainties will remain, and other factors will continue to apply pressure. Net-zero sustainability initiatives and electric vehicle adoption imply further unpredictable changes for storage. Regulation and community resistance restrict new projects. The implications for inspectors are that bidding for contracts will be more competitive. Only the smartest, most efficient teams that adapt to the new reality are likely to survive.



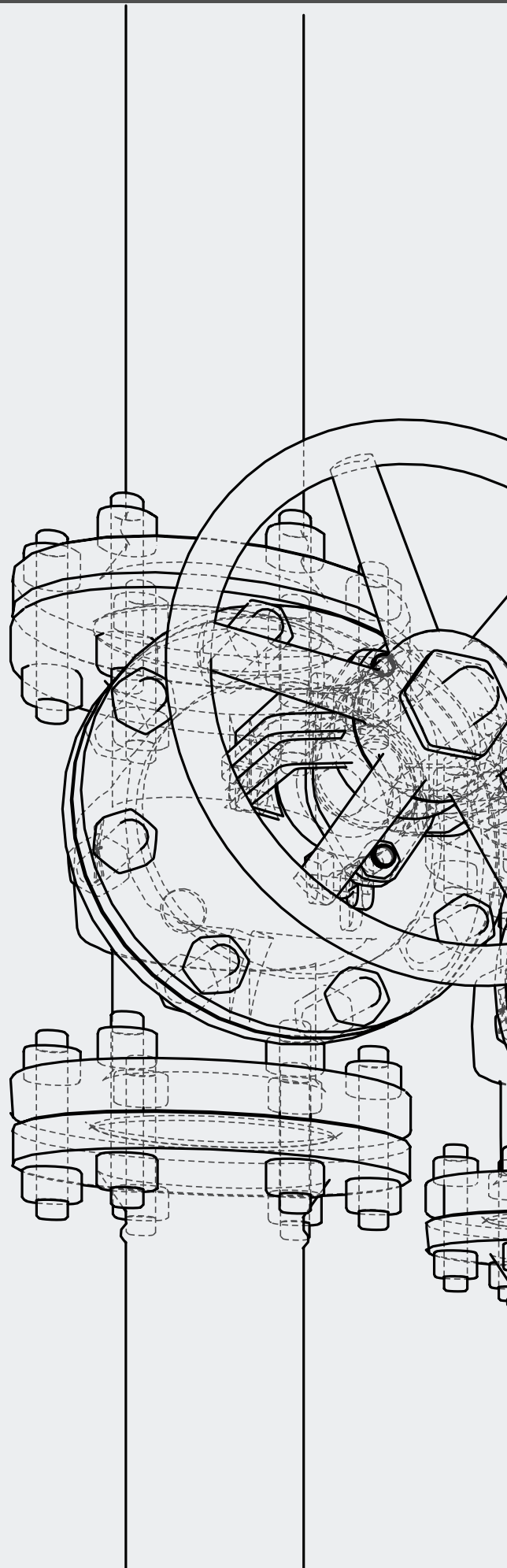


## Conclusions

Fortunately for Mr. Walling, he found his lost notebook, but the idea had taken root, and the initial concept of the API Inspectors Toolbox was born. With the resources of Technical Toolboxes, it has grown into the API Inspectors Toolbox Enterprise Edition. Today, it saves inspectors more than 90% of the time they would otherwise spend on each report.

On the HUB<sup>PL</sup>, the API 653 module is an outstanding report-building workflow for inspectors. It is one dynamic tool among many on the HUB<sup>PL</sup> for gathering data, researching reference sources, performing analyses, and compiling the final report documents as part of a singular, integrated data environment.

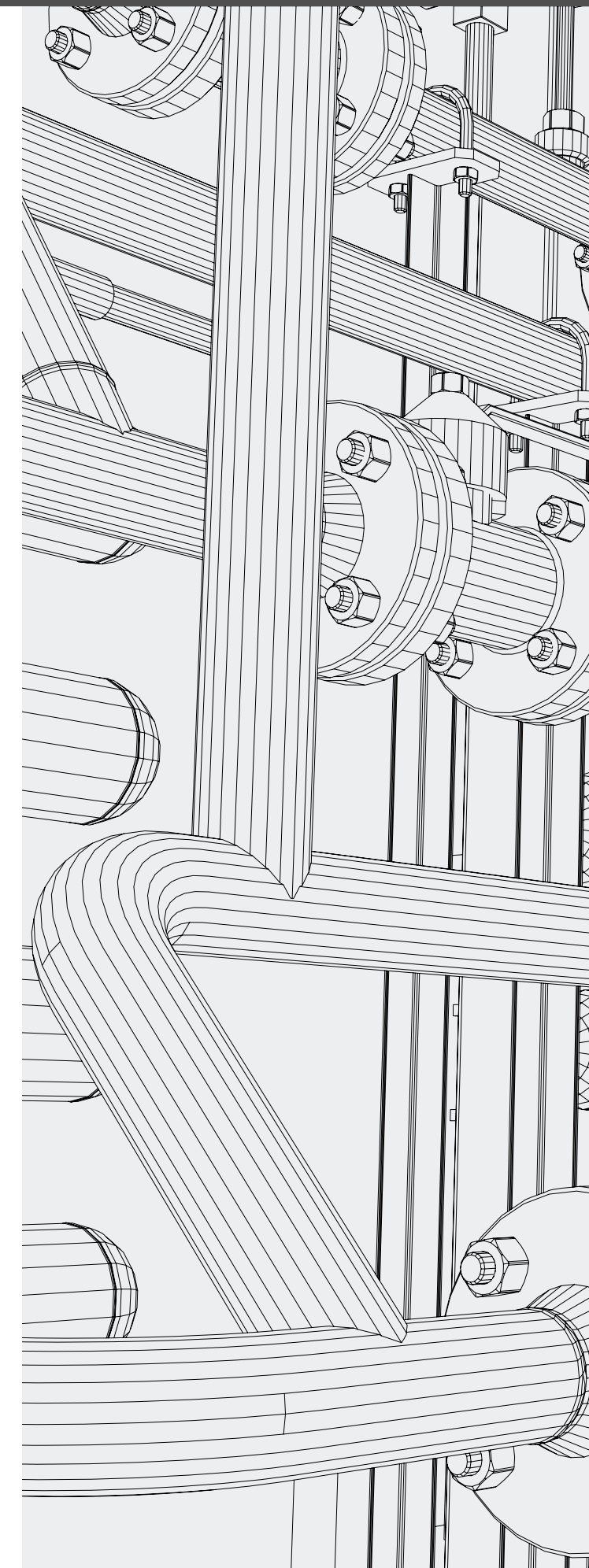
**“On the HUB<sup>PL</sup>, the API 653 module is an outstanding report-building workflow for inspectors.”**



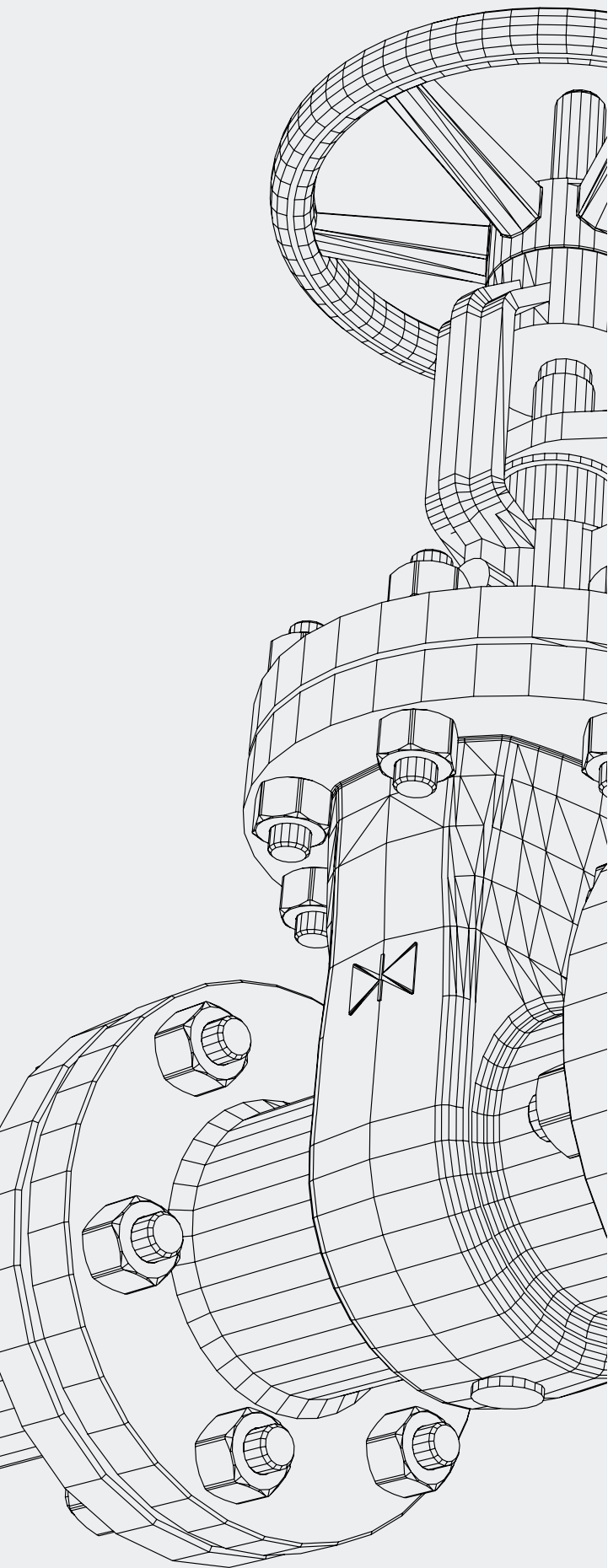


## Your Next Step

- Request a demo or software trial
- Register for a Technical Toolboxes training course or webinar
- Contact us with questions or send us your feedback
- Download the API Buyers Guide and Success Stories eBooks







## Jeff Walling

Mr. Walling has over 40 years of experience that spans the spectrum of the industry. He holds a degree in mechanical engineering technology with certifications in API-653, API-510, API-570, Steel Tank Institute, and PA DEP (IAF/AIM).

In practice, Mr. Walling's experience includes plant operations, maintenance, MI Inspections, PSM and engineering consulting, software development, and training. He has worked in petroleum refineries, chemical plants, industrial refrigeration, power plants, pipelines, and tank farms throughout his career. He has worked with many government organizations such as NASA and DoD POL systems.

In September of 2013, Mr. Walling founded Eagle Inspection Technologies. Since its launch, the company has gone from strength to strength. He is the original author of the API Inspectors Toolbox. He first assembled a catalog of inspection and engineering data management tools and calculations, material, repair specifications, and reporting. Today, it is the leading automation tool for API 653, 510, and 570 inspections and reporting.

“Mr. Walling has over 40 years of experience that spans the spectrum of the industry.”





Technical Toolboxes  
3801 Kirby Drive, Suite 520  
Houston, TX 77098

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

[info@technicaltoolboxes.com](mailto:info@technicaltoolboxes.com)  
[www.technicaltoolboxes.com](http://www.technicaltoolboxes.com)

(C) Technical Toolboxes. All rights reserved.



Technical Toolboxes is an Authorized Reseller of PRCI products

PRCI Products:  
PRCI RSTRENG  
PRCI AC Mitigation Toolbox

Technical Toolboxes Products:  
Pipeline Toolbox  
AC Mitigation PowerTool  
ECDA & Remaining Life  
API Inspectors Toolbox

## About Technical Toolboxes

Technical Toolboxes is a leading provider of integrated desktop and cloud-based pipeline software, online resources, and technical training for pipeline engineering professionals around the world. The integrated software products developed by Technical Toolboxes provide engineering software productivity tools for standardization, and we deliver oil and gas industry training courses covering a breadth of topics with industry-recognized instructors.