

A close-up photograph of a large industrial HDD (Horizontal Directional Drilling) power tool. The tool is heavily used, with significant rust and peeling blue paint. A central drill pipe is visible, extending from the foreground into the background. The background shows more of the tool's structure and a bright, overcast sky.

HDD PowerTool Success Stories

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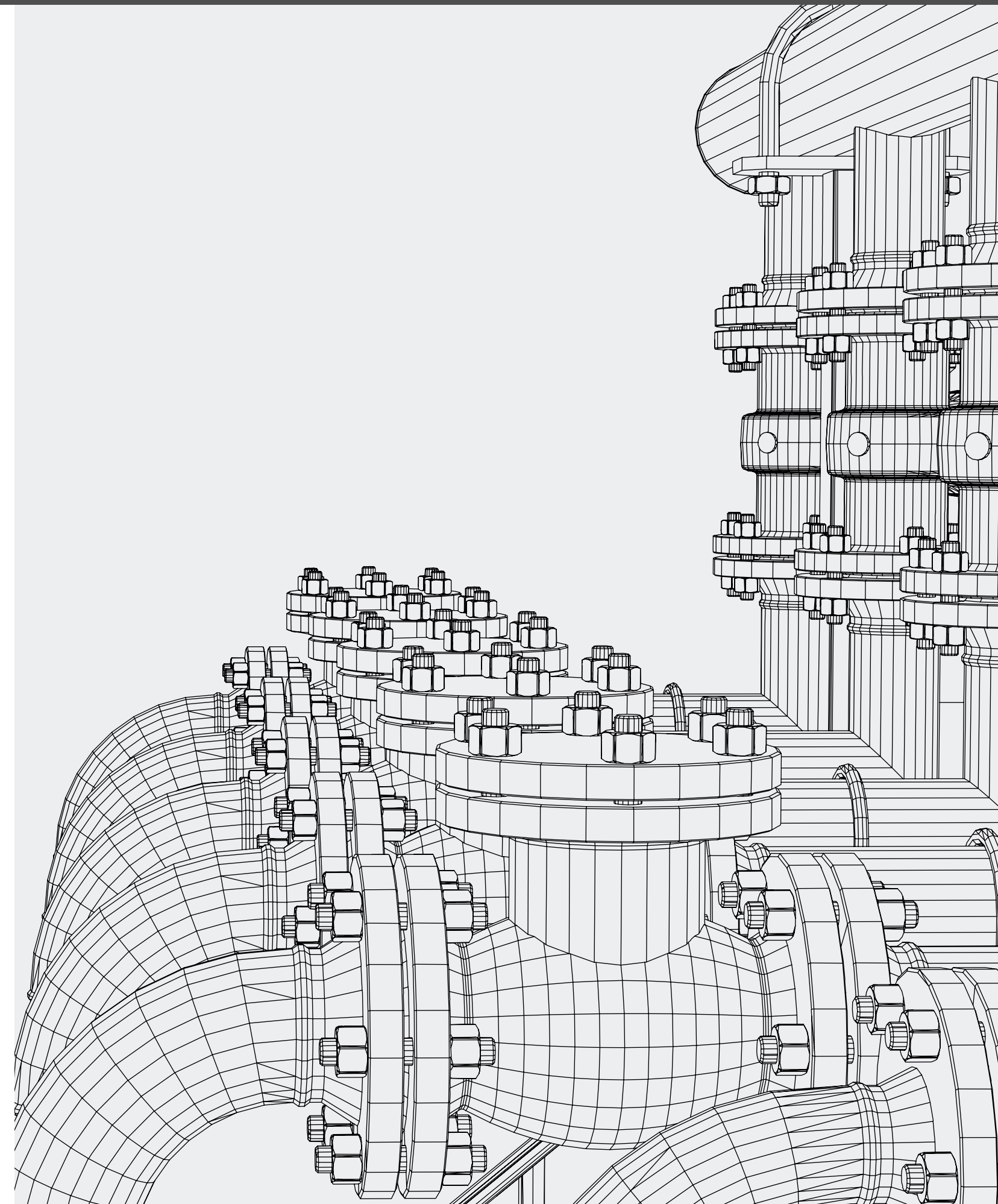
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Who Should Read This?

For each company that plays a role in the design and execution of HDD projects, such as pipeline operators, engineering service providers, and contractors, cost management is an instrumental part of maintaining profitability. Apart from reducing costs, this type of management includes increasing efficiency where possible while also mitigating risks.

Due to the complexity and risk involved in HDD projects, it is important that your team has access to specialized tools designed to overcome the inherent challenges of each phase of the project from borehole design and stress and frac-out analysis, through project reporting. Therefore, if you are an operator who owns the midstream oil and gas pipeline asset, faces situations associated with inadvertent results from frac-out incidents, and are concerned with managing overhead, you should be interested in this content.

Engineering service providers have a different set of challenges. This includes consideration of how to design quickly and efficiently while controlling the plan, costs for their client, and iteration when needed. The concerns that you may need to address include if the length of the drill will suffice and how its total length may be reduced while ensuring that the pipe is not overstressed.

“...specialized tools designed to overcome the inherent challenges of each phase of the project.”

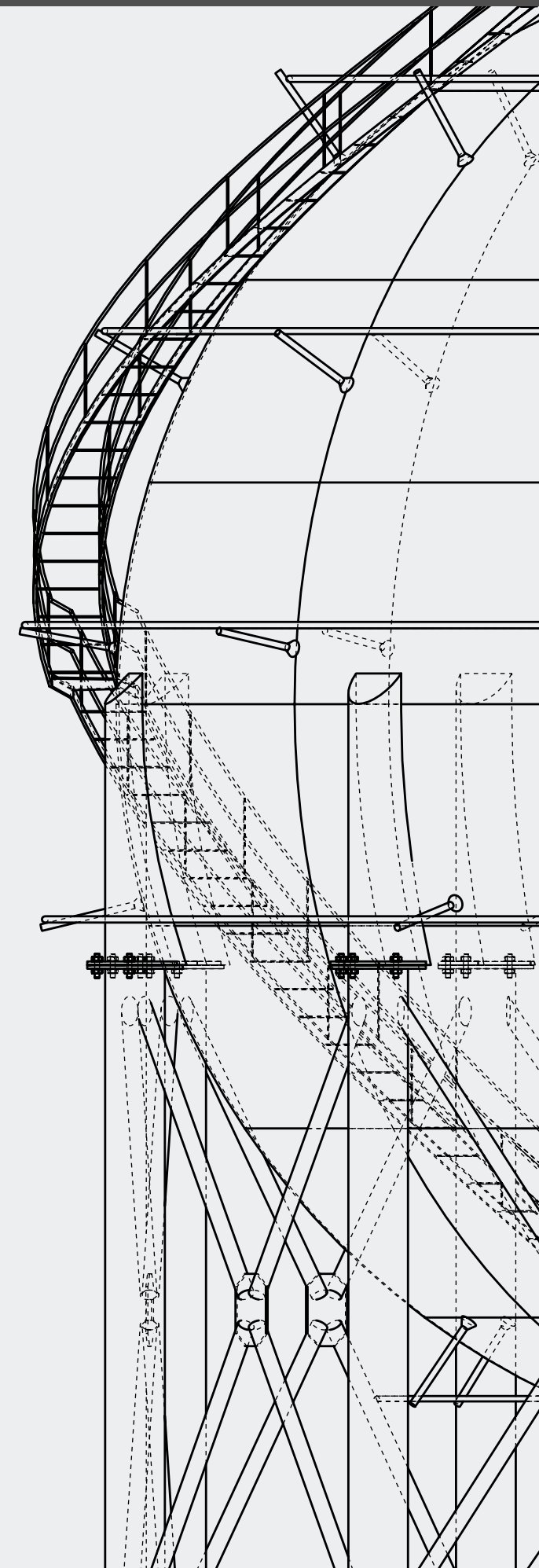


“The Horizontal Directional Drilling PowerTool (HDDPT) applies industry knowledge to guide each differing perspective.”

Furthermore, the ability to validate a contractor’s construction plan in a simple and easy manner is important. Hence, organizations who design the drill path, create reports, run the stress calculations, conduct the feasibility analysis, among other tasks, should also read this.

Lastly, if you are a contractor or construction company who installs the HDD, apart from cost and schedule overruns, your concerns include pipe stress management to avoid breaks and failures in drills that can greatly increase costs when not handled properly. Therefore, quick validations of the designs are indispensable. The practical experience from years in the field provides you with an ability to understand the functional aspects of schematics.

With this software toolkit, you can validate said experience in a way that allows you to quickly ensure that a theoretical design will work in the field. Hence, you will also be interested in reading this.



Background

Time management, cost control, and efficiency are primary factors for being profitable in horizontal directional drilling (HDD) projects for all parties involved. These three aspects, however, require tools that can leverage the power and speed of technology while also providing the flexibility needed to be successful in an industry that requires the ability to adjust. Operators, engineers, and contractors all require specific characteristics to achieve said efficiency. Therefore, The Horizontal Directional Drilling PowerTool (HDDPT) applies industry knowledge to guide each differing perspective to achieve cost savings, accelerate project schedules, and mitigate construction risk from their individual points of view.

After interviewing a Director of Capital Projects, an Engineering Design Manager, and a Construction Project Manager from three major North American companies, we were able to evaluate how the HDDPT can produce cost savings, increase your organizations engineering performance, and free cash flow throughout each sector that covers the HDD value chain.

So, if you ever thought, “we just need a simple spreadsheet as these types of tools may be too much for us,” read on. You may be surprised how simple it was for other companies like yours to reduce costs by

“...avoided weeks of delays which could have, in turn, led to budget and schedule overruns.”

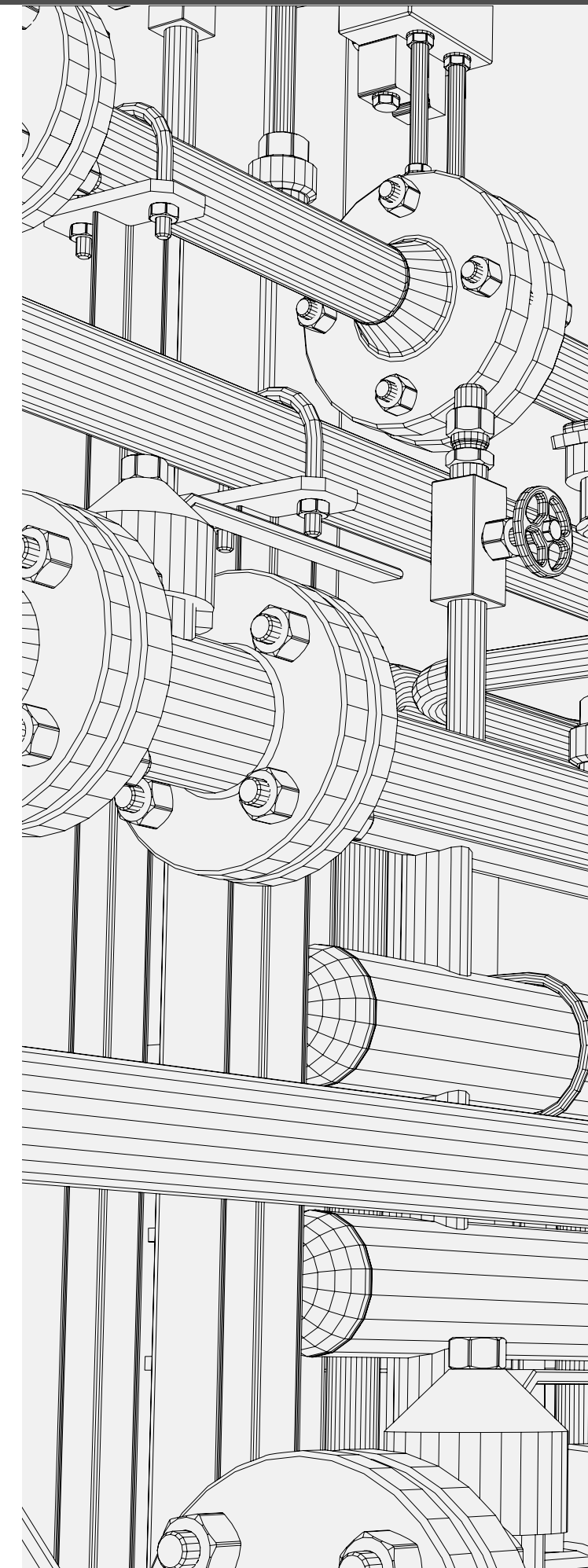


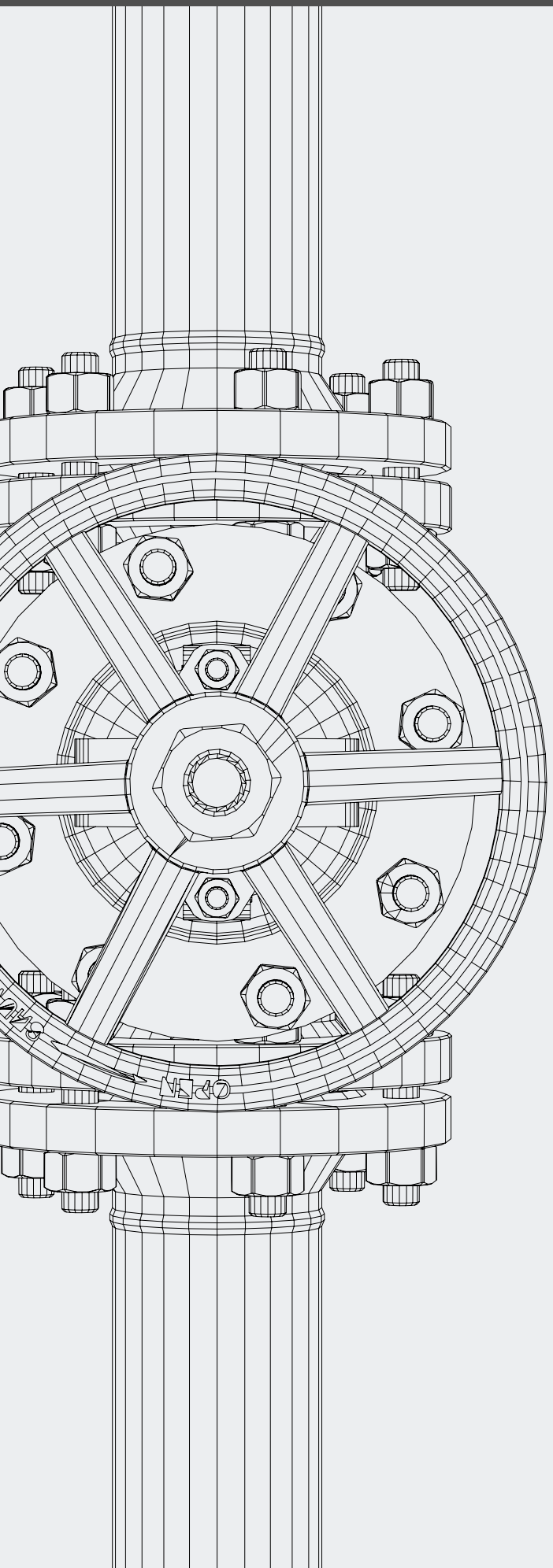
Success Story: How an Operator uses HDDPT

One North American operator uses the software tool to increase profitability by avoiding costs while increasing effectiveness. According to the company's Director of Capital Projects, the application is intuitive and so easy to use that the learning curve is minimal.

When needed, technical support is available to provide insight into any feature and applicable use case. This allowed the organization to avoid subcontracting out smaller HDD design projects while also decreasing design time, producing a two-way cost reduction that led to more profitable assignments. The HDDPTI provided the company with the confidence needed to take on these smaller projects.

The organization also states that for larger projects, while these are subcontracted out, the software suite allows them to retain a level of control and collaboration that creates a system of checks and balances that ultimately avoids mistakes and leads to improvements in the validation process.





According to the Director of Capital Projects, the PowerTool prevents the organization from “being mindless” in the process and encourages a level of substantiation that increases confidence.

In one instance, the HDDPT provided quick validations for a PE HDD project where problems were caught, allowing for the ability to go back to the engineering firm for fixes in the design. The frontend mitigation avoided weeks of delays which could have, in turn, led to budget and schedule overruns. Based on the interviewee’s perspective, when equating weeks to dollars, this was a very realistic “six-figure catch.”

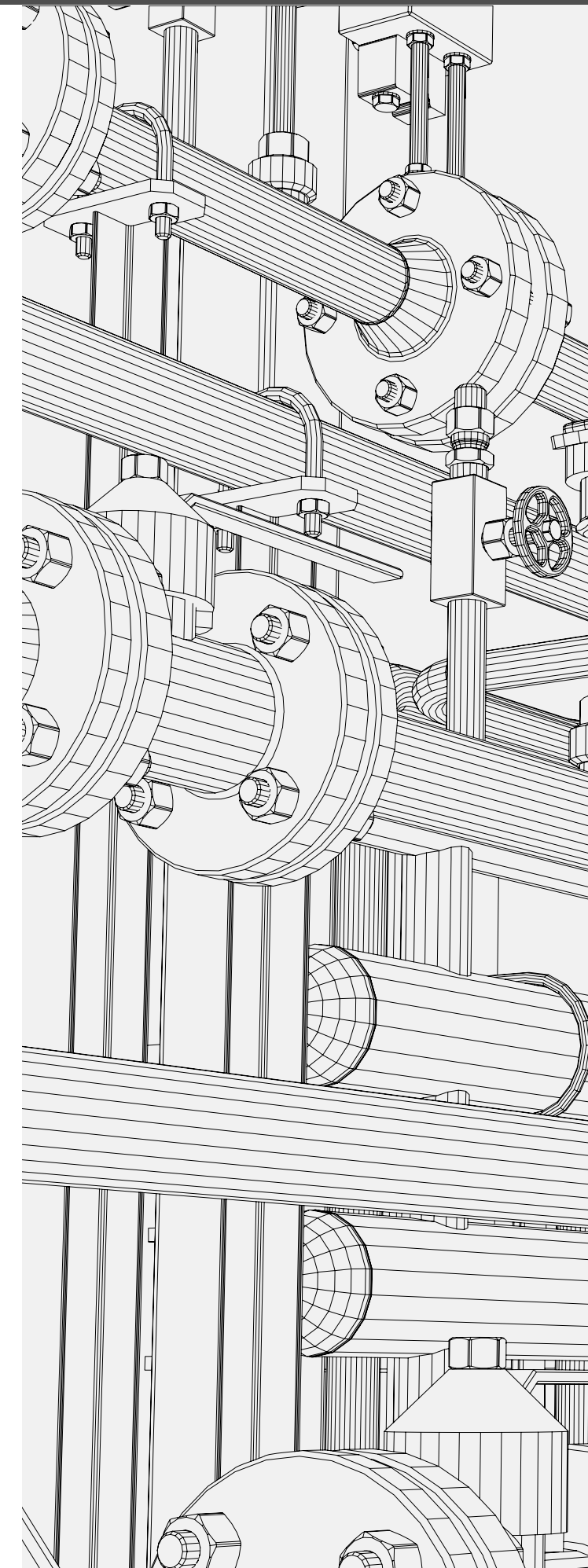
“The HDDPT, combined with the Pipeline HUB, essentially guaranteed standardization.”

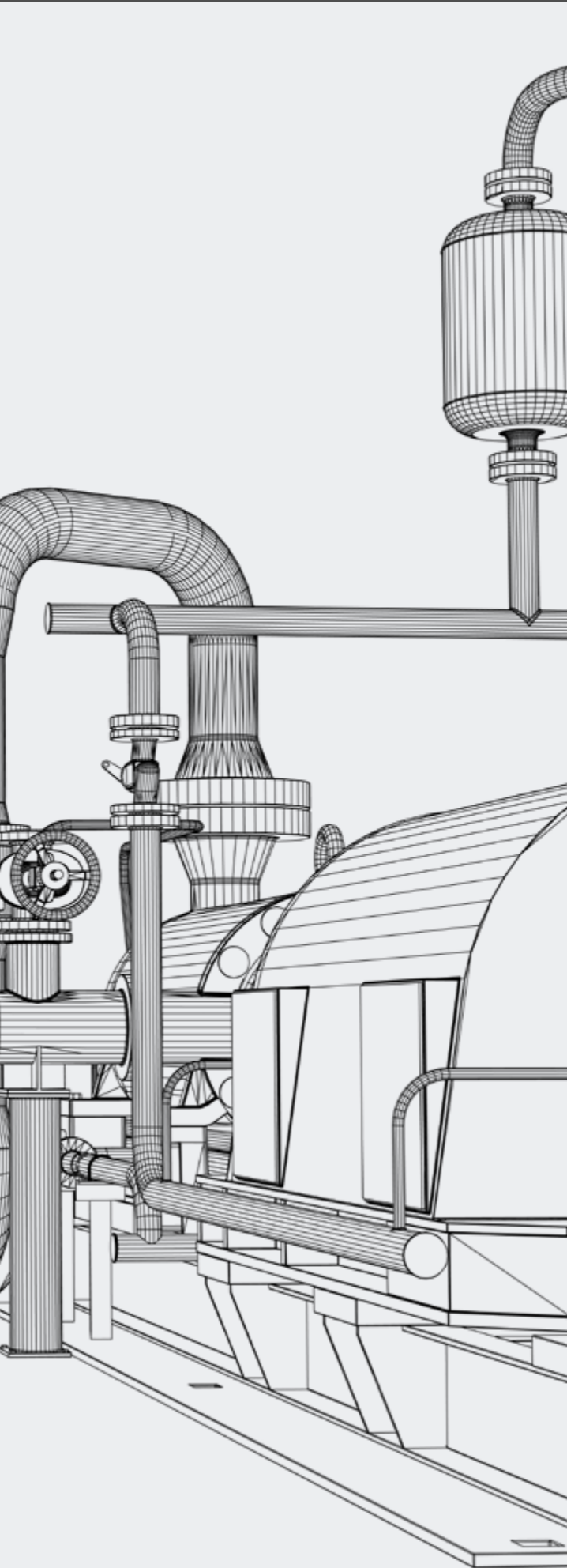


Success Story: HDDPT From an Engineering Service Provider's Perspective

Engineers need to be able to create optimal designs for a client while remaining as billable as possible. Therefore, operating inefficiencies, including the use of cumbersome software, can lead to wasted time that does not produce profitable hours. However, according to an Engineer Design Manager from a leading engineering service provider in the industry, the HDDPT is an easy-to-use suite that is quick to learn, avoiding unbillable time. As the engineer stated, "clients do not pay you to troubleshoot software; therefore, an intuitive design in the tool that we use is non-negotiable, which also allows our engineers to easily iterate when needed. Because things rarely go as planned.."

An additional need from an engineering service provider's perspective is standardization. The company stated that they have five different groups each using distinct methodologies. One of the groups uses HDD PowerTool while the others use Microsoft Excel and other industry tools. However, Technical Toolboxes helped standardize all this, creating a cross-company implementation that allows and promotes collaboration within the software due to the HDDPT being embedded within Technical Toolboxes Pipeline HUB engineering performance platform.





The HDDPT, combined with the Pipeline HUB, essentially guaranteed standardization. “When our group in one city wanted to reference a drill that was done in another city or by another person, the application suite allowed this with ease,” said the Design Manager.

When asked why the organization decided to use the HDDPT, the interviewee mentioned that, with the software, his company was able to design and iterate successfully in a manner that was impossible with other industry tools. Other third-party solutions also allow for an entire drill design and then verifying that the design works. However, if a mistake is detected, these applications force the designer to start over. According to the interviewed engineer, this tool is built with editions and customization in mind for both steel and polyethylene pipe applications. Therefore, instead of spending time in unbillable hours, the organization can focus on making the necessary adjustments in a more efficient way than with any other software system.

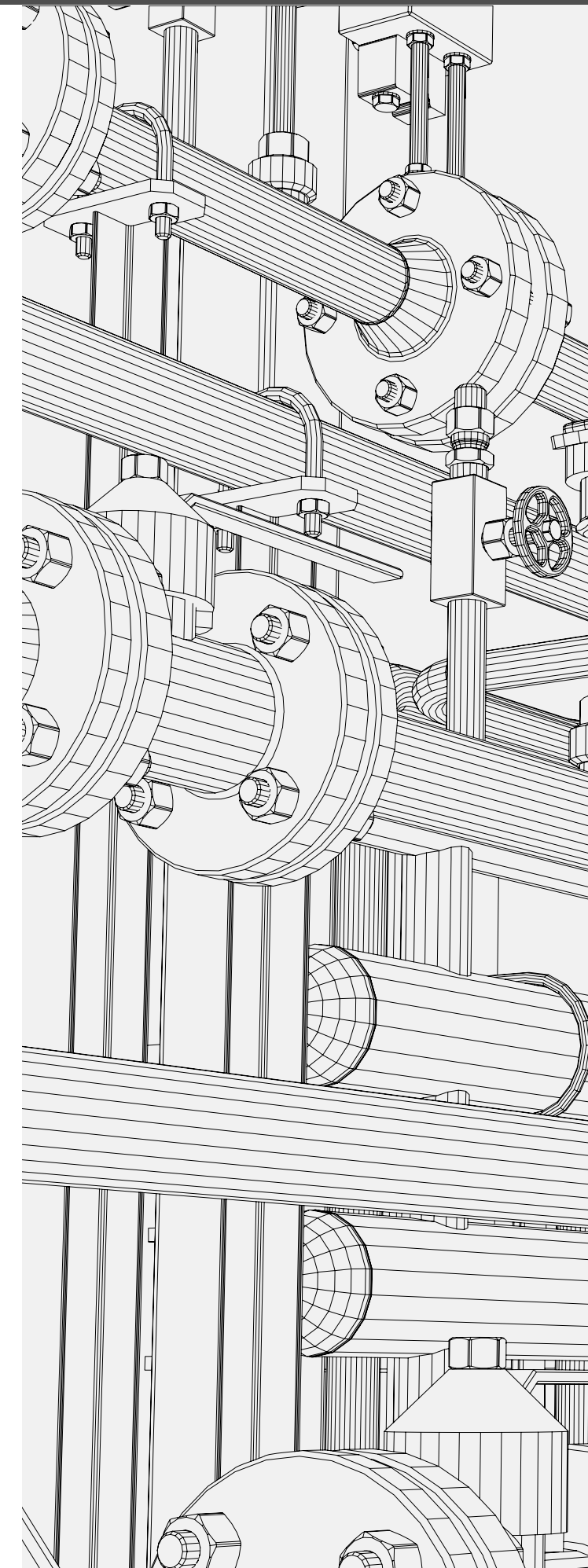
“Your analysis should give go/no-go decision-points... before you have a drilling team on the clock waiting in the field.”



Success Story: On-the-fly Decision Making Power Given to a Contractor

Contractors are practical people who have in-depth experience in the implementation of any project. The focus is on executing the theoretical designs that others have created. Nevertheless, their skill and know-how provide insight into what may or may not work in practice. Contractors need to understand and validate a design provided by an engineer. In the success story of a Construction Project Manager, it was mentioned that one of the most important aspects of the HDDPT was its ability to provide them with a way to propose and make changes to designs while justifying such changes to the other parties involved in the process.

Additionally, the quick evaluation of schematics provides flexibility and decision-making that saves time and, consequently, monetary resources. For example, for this interviewed contractor, the specific modules for mud management in the PowerTool, along with analyses and practical schematics for congested site management tools which calculate required catenary bends can be the difference between being profitable and reacting to a problem that could have been avoided with some validation and tools.



Conclusions

The successful implementation of technology and software tools depends greatly on user acceptance, ease of use, and applicability of its characteristics. While there are feature-rich applications that can generate efficiencies upon employment, their cumbersome nature leads to wasted time, unbillable hours, and rejection by its users. Therefore, our tools have been developed with the end-user in mind, be it operators, engineers, or contractors, and tailored to fit the needs that directly relate to the effectiveness of completing tasks in the least amount of time and effort.

The concept of the HDDPT is to leverage the power of technology using practical experience from industry experts while maximizing a return on investment by providing flexibility, decreasing the complexity of tasks, and increasing efficiency. The success stories of our users provide a proof of concept that demonstrates how different players with differing perspectives can be productive in using the appropriate tools.

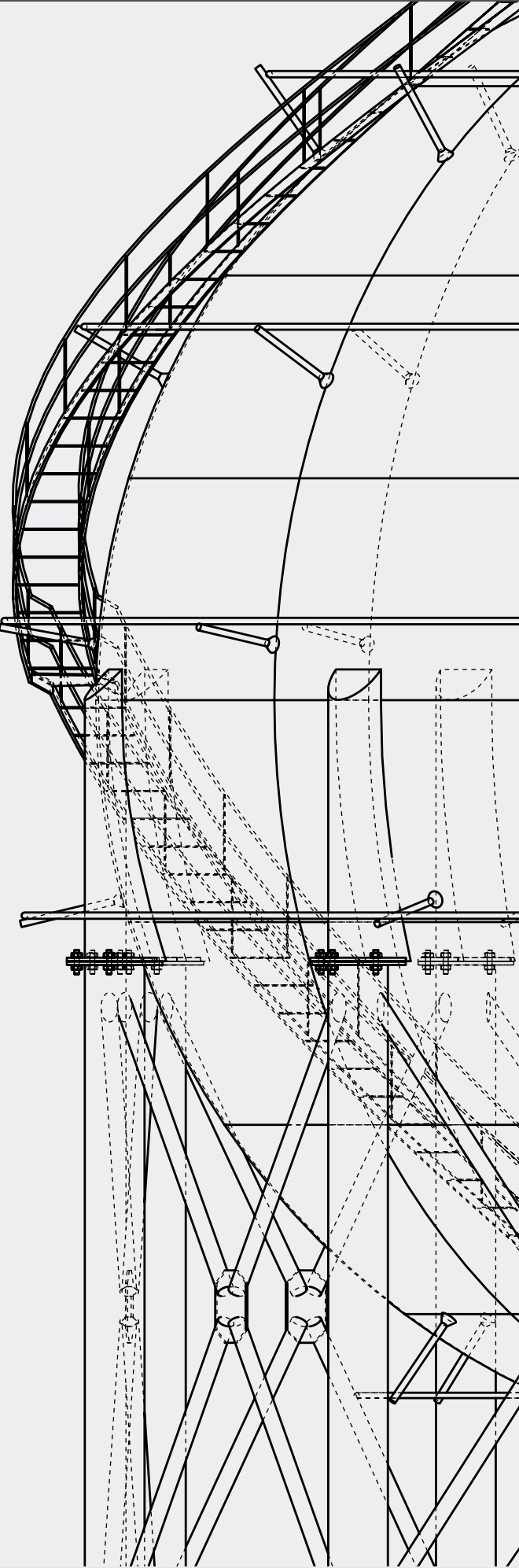
“...leverage the power of technology... while maximizing a return on investment by providing flexibility...”





Next Steps

- Request an HDD PowerTool demo
- Contact us anytime with questions or send us your feedback
- Visit the Technical Toolboxes website for more resources
- Register for an HDD training course





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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.