



Skid Plant of Propellant oxidizing for rocket fuel

*High-Purity Propellant Oxidizer Skid Plant
– Design, Fabrication & Supply for 99% Purity.*



Industry

Research and Development Organization.



Client Summary

Our client specializes in the development of satellite launch vehicles and associated technologies. Over the decades, it has been instrumental in advancing India's capabilities in space exploration and satellite deployment. The core activities encompass research and development in areas such as aeronautics, avionics, composites, propulsion, and space ordnance.



Highlights

- Conducted a **feasibility study** to evaluate the effectiveness of the newly developed process.
- Generated **engineering data** essential for scaling up the process to a commercial level.
- Successfully fabricated and commissioned the system in **compliance with international engineering standards**.
- Performed a **HAZOP study**, reinforcing the project's safety framework and ensuring risk mitigation.
- Instron Technologies' strength lies in proposing **end-to-end solutions** for skid plants.



Challenges

- **Managing Complex Specifications:** Expertly handling intricate design and engineering requirements across diverse industrial applications.
- **Managing Uncertainty & Variability:** Addressing unexpected process variations and refining parameters for consistent output.
- **Extreme Low-Temperature Control:** Achieving and maintaining ultra-low temperatures down to -60°C while ensuring system stability and efficiency.
- **High-Temperature Reactor Design:** Engineering a reactor capable of withstanding extreme temperatures up to 1000°C using specialized materials of construction (MOC).
- **Wide Temperature Range Management:** Developing a process that seamlessly integrates both high and low-temperature operations, ranging from -60°C to 900°C , without compromising performance or safety.
- **Ensuring Safety Compliance:** Meeting stringent safety standards across multiple regulatory frameworks.



Project Success Factors

- ✓ **Commitment to Quality:** Maintaining excellence in design, engineering, and project execution.
- ✓ **Robust Monitoring & Control Systems:** Leveraging real-time monitoring and automation to maintain critical parameters within optimal ranges.
- ✓ **Innovative Problem-Solving:** Applying creativity and technical expertise to tackle complex challenges.
- ✓ **Client-Centric Approach:** Fostering strong relationships through exceptional service and a deep understanding of client needs.
- ✓ **Efficient Project Management:** Ensuring timely delivery and cost-effective execution through structured planning.
- ✓ **Regulatory Compliance:** Adhering to industry standards and safety regulations for seamless project approval.


Customer Feedback

- The Skid Plant developed for our novel process has greatly improved our research capabilities and scalability. We appreciate the team's expertise and attention to customization, ensuring seamless integration and efficiency within timelines.
- The Skid Plant has been instrumental in bridging the gap between research and commercial scalability.

About Instron Technologies

Instron Technologies, with operations in India and Canada, is a leader in Process Skid Plants and Industrial Automation with Digital Factory Solutions, committed to sustainability. Our dynamic team develops innovative solutions that address critical customer challenges while emphasizing eco-friendly practices. We proudly serve the Manufacturing, Automotive, Chemical, Oil & Gas, Food & Beverage industries, and Research Labs, delivering cutting-edge solutions that enhance operational efficiency and drive sustainable growth. With a strong presence in over 10 countries and a trusted partnership with more than 200 clients, we remain dedicated to innovation, efficiency, and environmental responsibility.

Contact Us for More Details

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