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Q. What was the mission in mind with which the seed for Snowbell Machines was sown two decades ago?

ST: Our mission at Snowbell Machines was to reduce India's dependence on imported European injectable machines by offering locally made, comparable technology. We are committed to the 'Make In India' initiative, showcasing our customized solutions to raise awareness of their quality and benefits.

Q. With your expertise through two decades in the pharma machinery domain particularly in the Injectables, which are the three key challenges you faced and how did you address to stay ahead in the competition?

ST: The pharmaceutical machinery industry, particularly in injectables, is both demanding and competitive. We have tackled three major challenges. First, we have navigated the complex world of regulatory compliance, ensuring our products not only meet rigorous standards but also adapt to evolving regulations. Second, keeping up with rapid technological advancements has been key to staying competitive, and we have worked hard to incorporate the latest innovations. Lastly, market competition has pushed us to consistently deliver high quality, innovate continuously, and provide top-notch service. Through it all, our commitment to quality, openness to new ideas, and focus on our customers have been the cornerstones of our success.

Q. In your opinion, what shall be the road map for Indian Pharma machine manufacturers to adopt to digitization tools?

ST: For Indian pharma machine manufacturers, starting the digitization journey involves assessing your current setup and pinpointing where digital tools can add the most value. Begin by investing in team training and upgrading your IT infrastructure to support new technologies. Integrating IoT sensors and automation can boost efficiency while focusing on data analytics will help optimize your processes.

Q: In your experience, what strategies one shall adopt in the era of automation to stay compliant globally?

ST: In today's automated world, staying compliant with global regulations is essential for pharmaceutical manufacturers. Start by keeping up to date with regulations from bodies like the FDA, EMA, and PMDA. Integrate automated Quality Management Systems (QMS) with your production to ensure real-time monitoring and accurate documentation. Don't forget about cybersecurity - keep your systems updated to protect against threats. Take a risk-based approach by assessing potential compliance risks and having backup plans ready. Finally, use automation to monitor processes in real-time and generate reports, so you can quickly address any issues and stay compliant. By following these steps, you can navigate global regulations effectively while making the most of automation.

Q: What developments you foresee in the field of machinery for biologics and the skill set needed to address the challenges?

ST: Advanced filling and inspection systems are increasingly precise and accurate, making it crucial to understand their operation. Enhanced sterilization processes are vital for ensuring product sterility, so mastering these technologies is

essential. To effectively monitor and manage things in real time, you'll need to use digital tools and automation. This means it's important to have skills in analysing data and using automated systems."

process. Overall, professionals who stay current with these technological advancements will be better positioned to manage and optimize modern manufacturing challenges. Keeping abreast of these



The rising demand for customized biologics is driving the development of flexible and modular machinery, which necessitates the ability to design and modify these systems effectively. Additionally, maintaining quality assurance and adhering to

developments will enhance their ability to ensure efficiency, compliance, and high-quality production.

Q: Where do you foresee India's growth as a nation for the pharmaceutical machinery manufacturing industry?

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regulatory compliance are imperative. A thorough understanding of regulatory standards is critical to ensuring product quality, with real-time quality monitoring systems playing a key role in this

ST: India's injectables industry is set to grow significantly. This growth is driven because of a few key reasons. Firstly, there's more demand both in India and around the world for biologics and injectables due to the rise in personalized medicine. Technology and innovation are also important. There's more investment in research and development to enhance machinery capabilities. Indian manufacturers are obtaining global certifications and adhering to strict quality standards to meet international requirements. Overall, with growing demand, new technology, strict quality control and sustainability efforts, India's pharmaceutical machinery industry is poised for substantial growth."