AEI Machines:

We Are Continually Refining and Evolving Our Production Processes & Capabilities



Mr. Alok Jain, Executive Director, Associated Engineers & Industrials Private Limited

"As a company spearheading the adoption of the latest technological trends... our machines have been Industry 4.0 ready for the last few years and include features such as fully networked architecture, remote access and monitoring, data collection and transmission features."

n an interview with Wire & Cable India, Mr. Alok Jain, Executive Director, Associated Engineers & Industrials Private Limited presents a rundown of the business story of the Company along with some notable accomplishments, the details about the manufacturing capabilities, the product portfolio, and the market presence of AEI Machines. Further, he also spoke on the key factors that have enabled the business to be more efficient, the expertise in developing and commissioning highend machinery for the wire and cable industry, the outlook on the role of automation and the growth strategies for the future years.

Wire & Cable India: The year 2021 marks the 50-year anniversary of AEI Machines serving the wire and cable industry; could you please shed light on some of the noteworthy accomplishments of the company in these 50-years?

Alok Jain: AEI Machines started its operations in 1971, under the leadership of our Chairman – Mr. L S Jain, with the manufacturing of cable machines. Over the years, our journey has been one of super-specialization. In the eighties, we moved towards the manufacture of rotating cable machines only and we were the pioneers to manufacture 1+3 Core Laying-Up Machines. Subsequently, in the nineties, we decided to concentrate on stranding machines wherein we made some of the largest planetary stranders of the time.

About 25 years ago, considering the importance of stranding efficiently in the process of cable making and its effect on the quality of the final product, we took the strategic decisions and a fundamental choice towards innovation and perfection of – Rigid Strander. This decision brought a plethora of opportunities for the company, from making some of the largest Rigid Stranders to the fastest ones.

Over the years, AEI has introduced many firsts for Rigid Stranders in the Indian market such as the first machine with batch loading system, electronic shaft, first machine for EHV cable manufacture, first machine for new generation HTLS conductor, etc. Today, AEI is ranked amongst the top names in the field worldwide, as a Rigid Strander Specialist.

WCI: Please shed some light on the manufacturing capabilities of the company along with the product portfolio?



AJ: We are an innovation-led company with strong focus on technical advancements in the stranding process. Our deep understanding of stranding nuances, technological prowess and machinebuilding experience translates to limitless adaptability of the machines to evolving customer and product requirements.

Some of the applications include machines for manufacture of:

- Highly compact round conductor up to 2500 mm2 in single pass for EHV cables
- Milliken segments for conductor up to 3000 mm2/500 kV
- High-speed manufacture of conductor for low voltage cables
- New generation HTLS conductor TW/ACCC
- High-speed manufacture of various overhead conductor ACSR/AAAC
- Copper wire screening of high voltage cables
- Steel wire/strip armouring
- Laying up of control cables

WCI: Are there any aspirations to expand your capacity in the near future? Also, kindly outline the recent product developments at your end and the upgradations you have introduced in the recent past at your production unit.

AJ: We have recently completed the addition of a modern fabrication

facility to meet market-demands. Expanding our capacity is always within our plans to ensure competitiveness with the focus remaining on innovation, adaptability and sustainability. High-performance machine building is as much an art as science and therefore, investment in human capital development is equally important, if not more.

We continuously explore, develop and create prototypes for new concepts that we can implement on our machine, enhancing their performance. Our recent design developments in terms of engineering and automation are featured in our latest models. One of the recent examples is the development of machines for screening high voltage cables up to 3000 mm2 and diameter up to 150 mm with 96 wires and inline taping.

Upgrades on floor and machines are a continuous process that reinforces AEI's approach to lead the future machinery industry as a strong solution provider.

WCI: What is the present market reach of the company – both globally and domestically? What are your plans with regard to extending your reach to newer markets? Further, please highlight the presence the company has made in the international markets through exports.

AJ: Over the years, due to their build quality and technology, AEI

Machines have come to be known for their performance and resilience. Eight out of every ten renowned low, medium and EHV cable manufacturers and large overhead conductor manufacturers in India use AEI Stranders. We are thankful to our customers for entrusting us with the most prestigious projects and challenging applications and we are grateful that the majority of our production is for repeat orders of existing customers.

Exposure to international markets is something we had started working early on with initial supplies within South Asia. Today, our machines have been selected for projects in varied regions such as Europe, North America, Africa and the Middle East. We are competing in the global arena amongst the top manufacturers, with our machines satisfying various safety and conformity certifications such as CE, CSA, etc. and we take pride in representing machines engineered and made in India to the world.

WCI: What are the key factors that have enabled the business to be more efficient and responsive to market-needs? Also, how do you strive to make your operations more efficient and productive to derive even more value and enhance your competitiveness?

AJ: It takes a lot of effort and discipline to remain focused on creating value through performance and excellence while the world around is driven by cost reductions at



the expense of quality. Increasingly, customers are looking at capital investment as a onetime exercise considering total cost of ownership rather than the initial cost only which provides benefits for several years to come in terms of the cost of energy cost, manpower cost, material savings and product quality.

We are continually refining and evolving our production processes and capabilities. I would say that a multifaceted-approach with a great team, continuous product development, focus on quality, customer service and work ethos have placed us as the company of choice for most cable and conductor manufacturers.

WCI: Having expertise in developing and commissioning high-end machinery and solutions for the wire and cable industry including the largest stranders in the world, with meticulous focus and regard to productivity; how does the company bring sophisticated machines that require minimal maintenance and deliver decades of trouble-free operation?

AJ: Manufacturing excellence has

always been a vital part of AEI Machines' offering to its customers. The performance and durability of AEI Machines depend on the high standard materials, precise engineering and accurate assembly. Every machine carries our deep knowledge and process understanding of the field, starting with several hours of design development for the smallest of the functionalities.

By employing best engineering practices and using the latest machinery at our works, by incorporating brought out materials from the best in the industry, we ensure that the machines are ready to withstand years of trouble-free operation without fail. Almost all machined components are manufactured in-house for total control on the processes at all stages. Latest developments in automation and control technology are incorporated to achieve higher production rates, more efficient use of materials, better product quality and safety. Our experience of 50 years in the field ensures that the machines designed and manufactured deliver full commercial production from the day they are commissioned.

WCI: As we are in the midst of Industry 4.o, the level of automation has been increasing consistently owing to its positive impact on productivity and efficiency. What is AEI Machines' outlook on the role of automation and the ways in which you integrate technological innovations as part of your business model?

AJ: We widely started incorporating automation systems in our machines for the last 25-years and it has become an integral part of all functionalities of our machines. This has helped in achieving very high levels of safety and efficiency while improving quality, and consistency as well as reducing the need of manpower. The way we have looked at automation is that it should not just make the machine more sophisticated but also fool-proof to use. While we ensure complete safety and safeguarding through complexity on the software back-end, the user interface is designed to be simple with intuitive controls on the operator side.

As a company spearheading the adoption of the latest technological trends, we are happy to inform you that our machines have been

Industry 4.0 ready for the last few years and include features such as fully networked architecture, remote access and monitoring, data collection and transmission features. As this ecosystem develops further in the coming years, with support from the end-user adoption of digitization of big data, we foresee most machine-innovation in this space and look forward to exciting times and possibilities through machine learning.

WCI: As the company is now at a significant milestone, how would you describe your core values of the company and the impact they have made in the past 50-years? How do you think the future years will pan out for the company? What will be your growth strategies for the future years?

AJ: From the early days of our organization, our founder Mr. L.S. Jain followed strong work ethics,

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integrity, and quality as the core values that set the foundation for the company to grow strong. Over the years, these guiding principles have become a part of our DNA and our relentless focus on innovation and customer experience has led AEI to be trusted as a top-performance machinery manufacturer.

Rapidly evolving manufacturing technologies are poised to reshape the global manufacturing landscape. Our company, being focused on technological advancements, has gained a distinguished reputation as the Rigid Strander specialist, in the domestic and international markets. Our growth strategies will be supported by continuing investment in the skills and infrastructure as we strongly believe that this is the only way to stay on the path to the global markets, while we continue to do service and expand our customer base in India.

