



# The Horizon

TOSL's OFFICIAL NEWSLETTER

ISSUE 15



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# End of Year Message

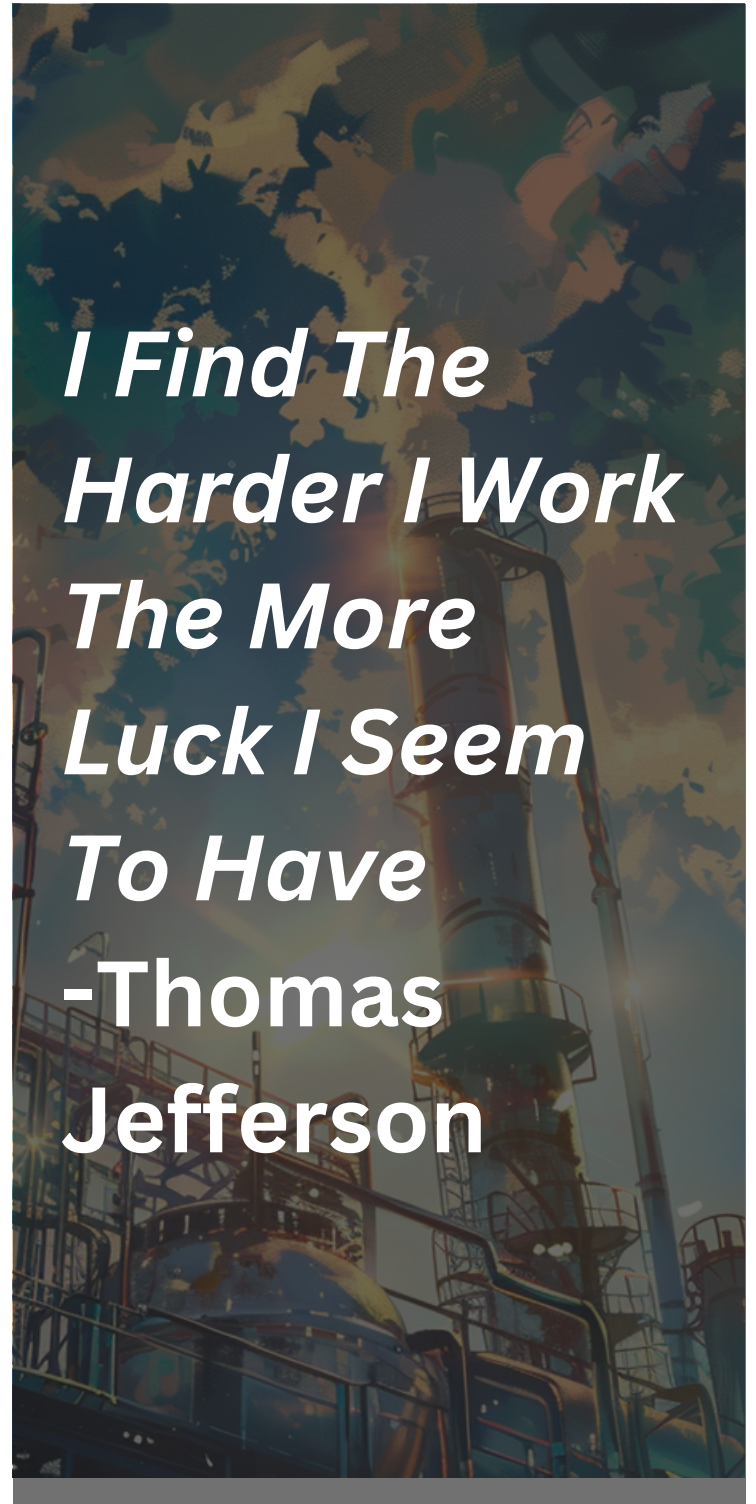


*Ricardo Mahadeo, Managing Director, TOSL*

As we approach the end of another transformative year, I am honoured to extend my heartfelt gratitude to each and every one of you, our valued clients. Together, we have navigated through unprecedented challenges and celebrated remarkable successes. In the face of global uncertainties, we at TOSL have demonstrated resilience, adaptability, and an unwavering commitment to excellence. Our collective efforts have not only sustained us but have propelled us forward. As we reflect on the past twelve months, I am filled with pride for what we have accomplished together. We have achieved significant milestones that have positioned us at TOSL as a leader in the industry. Our commitment to innovation, operational excellence, and customer satisfaction has propelled us forward, even in the face of challenges. Our success would not have been possible without the unwavering support of our clients. Your trust and collaboration have been integral to our achievements. Your belief in our vision and commitment to our shared goals have fueled our determination to overcome obstacles and reach new heights. I'm excited to share some updates that will set us up for success in 2024.

My theme for the year is "Simplicity - Unlocking Efficiency and Agility," and we've already taken concrete steps to make this a reality. In closing, I would like to express my deepest appreciation for your ongoing support. Together, we have not only weathered the storm but emerged stronger and more resilient.

As we celebrate the achievements of the past year, let us look forward to new opportunities, continued growth, and shared success in the years to come.



# Company News

## TOSL attends National Safety Council Expo



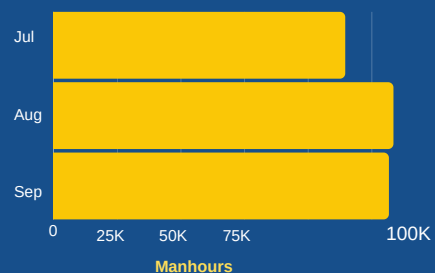
In October 2023, TOSL Engineering Limited participated in the National Safety Council (NSC) Safety Congress & Expo held in New Orleans. This renowned event, spanning over a century, is one of the largest annual safety gatherings globally, drawing organizations dedicated to prioritizing safety across various sectors.

TOSL's involvement emphasized its dedication to remaining informed about the latest advancements and networking with safety professionals. The expo provided an excellent platform for TOSL to interact with our partners, learn about new products, establish partnerships with innovative companies which provide solutions for common safety challenges in our region.

TOSL is dedicated to providing the best safety solutions to our clients and being part of the NSC Expo 2023 gives us a solid platform to accomplish this. Our vast portfolio of safety products from world leading brands were all present at NSC 2023 and we look forward to strengthening these relationships.

### HSSE STATS 2023 Q4:

- Oct - 91,641
- Nov - 106,796
- Dec - 105,370
- Total - 303,807
- Restricted Work Cases - 6



# Product & Service Spotlight

## ABB Baldor-Reliance: Powering excellence for over a century.



More than 100 years ago, ABB Baldor set out to build a better motor, and that's still our goal. Today, ABB is the world's number-one manufacturer of NEMA motors, and we're proud to support you locally with the Baldor-Reliance product brand. When you choose an ABB Baldor-Reliance motor, you get a product designed and manufactured for quality and reliability, backed by a global network of sales and support professionals dedicated to providing a world-class customer experience.

**AC Motors** – An AC motor is an electric motor driven by an alternating current (AC). The AC motor commonly consists of two basic parts, an outside stator having coils supplied with alternating current to produce a rotating magnetic field, and an inside rotor attached to the output shaft producing a second rotating magnetic field.

**Large AC Motors** – ABB Large AC (Above NEMA) motors are designed with higher than standard torques and low vibration levels which allows for a longer and safe operating life in applications requiring 250 Hp or greater, all while meeting the industry's reliability and efficiency standards.

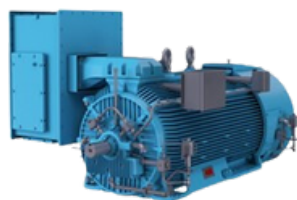
**DC Motors** – A DC motor is any of a class of rotary electrical motors that converts direct current electrical energy into mechanical energy.

- ✓ Installation
- ✓ Commissioning
- ✓ Preventative Maintenance
- ✓ Remote condition monitoring
- ✓ Smart Sensors



### AC Motors

- General Purpose - ABB provides a wide range of customizable, energy efficient Baldor-Reliance motors with robust, innovative designs for demanding applications and easy purchasing
- Severe Duty: ABB's Baldor-Reliance Severe Duty motors withstand harsh environments with rugged designs ensuring safe, reliable, and energy efficient operation
- ABB offers the widest selection of rugged, reliable Baldor-Reliance Washdown Duty motors with customized designs to withstand tough industrial and food processing environments.



### Large AC Motors

- AC motors up to 30,000 HP in various enclosures
- Inverter duty & sine wave designs, 2-20+ poles, 50/60 Hz
- NEMA & IEC, custom engineered for all environments
- Compliant with API, IEEE standards & hazardous locations
- Slip ring motors up to 24,000 HP, 380V-13.8kV, 400-1120mm frames
- Suitable for general purpose to harsh, severe-duty locations
- Custom engineered for every environment and application



### DC Motors

- Baldor-Reliance DC motors: round frame and unique laminated square frames
- Designed for performance and reliability in tough applications
- Round frame DC motors: Permanent magnet technology
- Optimized commutator, brushes, and inertia for best performance
- Wound field motors: High-performance molded commutators
- Superior commutation throughout the speed range



### Servo Motors

- ABB AC brushless servo motors for industrial automation
- Ideal for packaging, labeling, wrapping, and cutting applications
- Durable design for harsh environments
- Low and high-inertia models available
- Wide range of winding options
- Various feedback devices and gearheads to match specific needs
- Sustainable ferrite non-rare earth magnet material
- Windings potted for additional protection

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# Product & Service Spotlight

DEZURIK

## VALVE SOLUTIONS



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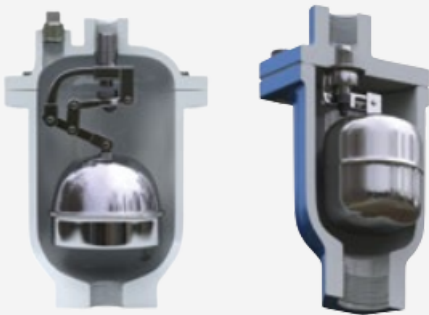


### DEZURIK UNINTERRUPTED SEAT RESILIENT-SEATED BUTTERFLY VALVES (BOS-US)

BOS-US Resilient-Seated Butterfly Valves feature an uninterrupted seat design, one-piece body, solid one-piece shaft and a high performance resilient seat. Sizes 2-20" (50-500mm) feature seat bonded to the body while sizes 24" (600mm) and larger feature a seat bonded to a solid backing ring.

### APCO AIR/VACUUM VALVES (AVV)

Air/Vacuum Valves are float operated and have a large discharge orifice equal in size to the valve's inlet. Air/Vacuum valves allow large volumes of air to be exhausted from or admitted into a pipeline as it is being filled or drained. As the pipeline fills, fluid enters the valve, raises the float and shuts-off. When draining the pipeline, the float drops and allows air to enter, preventing a vacuum and possible pipeline collapse or damaging water column separation.



### APCO AIR RELEASE VALVES (ARV)

Air Release Valves function to release air pockets that collect at each high point of a pressured pipeline, and are essential for pipeline efficiency and water hammer protection. Air Release Valves are available in a wide variety of orifice sizes and materials of construction to meet a wide range of applications.



**FULL DEZURIK LINE  
OF PREMIUM  
PRODUCTS  
AVAILABLE**

- Plug Valves
- Butterfly Valves
- Control Valves
- Knife Gate Valves
- Special Service Gate Valves
- Check Valves
- Automatic Air Valves
- Special Construction Gate Valves
- Vacuum Relief/Air Inlet Valves
- Ball & Cone Valves
- Hydraulic Power Units
- Actuators
- Thru-Port Gate Valves
- Hydro Valves
- Pump Control
- Wastewater/Sewage Air Valves

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# Case Study

## No Downtime - TOSL's Experts Overhaul Keeps Gas Flowing

ARIEL is the largest manufacturer of separable reciprocating gas compressors worldwide. ARIEL compressors are utilized by the global energy industry to extract, process, transport, store, and distribute natural gas from the wellhead to the end-user. TOSL Engineering Limited is the sole authorized distributor for ARIEL in Trinidad and Tobago. TOSL provides technical support to existing and future ARIEL operators/owners; supplies OEM spares; provides maintenance and overhaul services; and can design, supply and install complete ARIEL compressor packages. TOSL also owns, operates and maintains two ARIEL compressor packages (ARIEL JGK-4 powered by Waukesha L7044GSI) onboard its Mobile Offshore Production Unit (MOPU).

TOSL was engaged by one of our customers to overhaul their two ARIEL JGD-6 compressor packages (previously supplied, installed and commissioned by TOSL). The required work for the mechanical overhaul; servicing and repairing the automation and control systems; and servicing and calibrating the valves, transmitters and other protection switches were completed as scheduled by a multidisciplinary team. As the operator of an oil and gas production facility, TOSL understands the importance of ensuring that planned works are completed with the scheduled outage. The success of this project was therefore attributed to a trained, experienced, and competent team that meticulously planned and executed the work.

Authorized distributors of ARIEL have access to ARIEL's compressor database. Using the serial numbers of the units to be overhauled, the Rotating Equipment Maintenance (REM) Team was able to access ARIEL's database to acquire the Bill of Materials (BOM) for the units. Using the BOM a list of spares was prepared to complete the overhaul. The customer indicated that they had previously procured the required spares. Upon verification of the spares procured by the customer, our team noted that some of the necessary spares were not purchased.

The customer was notified of the required items that were not purchased and a quotation was provided for the supply of the necessary spares. Due to the limited number and diverse models of ARIEL compressors, it is impossible to stock all the spares required by our customers therefore only the required spares for the model of compressor owned by TOSL are purchased for stock. The spares required for the overhaul were not in our stock and had to be ordered from ARIEL. Our competent and experienced Expediting and Warehousing teams were able to import and deliver these spares in four weeks.

In planning for the execution of the overhaul, our experienced ARIEL factory-trained technicians reviewed and compiled the procedures; prepared a quality checklist; and completed a task-based risk assessment with the customer. Distributors' access to ARIEL's technical database greatly assisted with our document gathering and obtaining the compressor's repair and overhaul manual; engineering references with updates to the compressor's components and improved repair techniques; the units' balance data; and force feed lubrication configuration and rates. During the execution phase, all repairs were conducted to ARIEL's specifications; balance data was verified; and the force feed lubrication system was restored to the as-built configuration and rate. Upon completion of our checklist, our Predictive Maintenance Team conducted a vibrational analysis of the units on start-up.

This experience showed that conducting maintenance of gas compressors using OEM spares and a knowledgeable team of technicians leads to reliability during operation. OEM spares are designed, tested, and guaranteed by ARIEL to operate without problems when installed correctly. As the authorized Ariel distributor in Trinidad, TOSL provides customers with Ariel industry standards and unmatched customer support.


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# THANK YOU

THE HORIZON IS THE OFFICIAL  
QUARTERLY NEWSLETTER OF TOSL  
ENGINEERING LIMITED. IF YOU HAVE  
ANY QUESTIONS OR COMMENTS  
PLEASE FEEL FREE TO CONTACT US

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If you have a concern about TOSL  
you can report it anonymously any  
time, 24/7 in the following ways:

**Toll Free Hotline: +1 800 872-2281**

**OR**

**+1 877 RPT-LINE**

**OR**

**Report Online [www.tosl.com](http://www.tosl.com)**

**username: tosltd**

**Password: reportit**