

DECEMBER 2021 | ISSUE 8



# THE HORIZON

The Official Newsletter of TOSL Engineering Limited

## Managing Director's End Of Year Message

TOSL has remained resilient for yet another year as the coronavirus pandemic, now fuelled by the fast-spreading Omicron variant continues to impact on our operations as well as daily lives across our country. We have generally seen a rebound in the prices of petrochemicals and crude oil compared to this time last year. This has created opportunities due to increased spend on projects and maintenance works within the petrochemical and oil and gas sectors.

The United Nations Climate Change Conference - COP26 commitment to more ambitious targets to reduce greenhouse gas emissions by 2030 and reach 'net-zero' by 2050 have further increased reliance on renewable energy and carbon reduction mechanisms.

This global focus on energy efficiency and climate change has started to affect our local and regional energy landscape. NewGen has proposed the development of a carbon-neutral/green hydrogen production facility and NGC's foreign subsidiary has signed a term sheet to purchase blue methanol.

cont'd on pg 02

### THIS MONTH'S FEATURED ARTICLES

- Managing Director - End of Year Message : pg 1, 2
- Lessons Learnt (Quality & HSSE) pg 3,4
- Product Spotlight pg 5,6
- CSR pg 7
- Case Study - BK Vibro pg 8

**"TOSL continues to adapt to the new ways of working through technological advancements and the use of virtual platforms"**

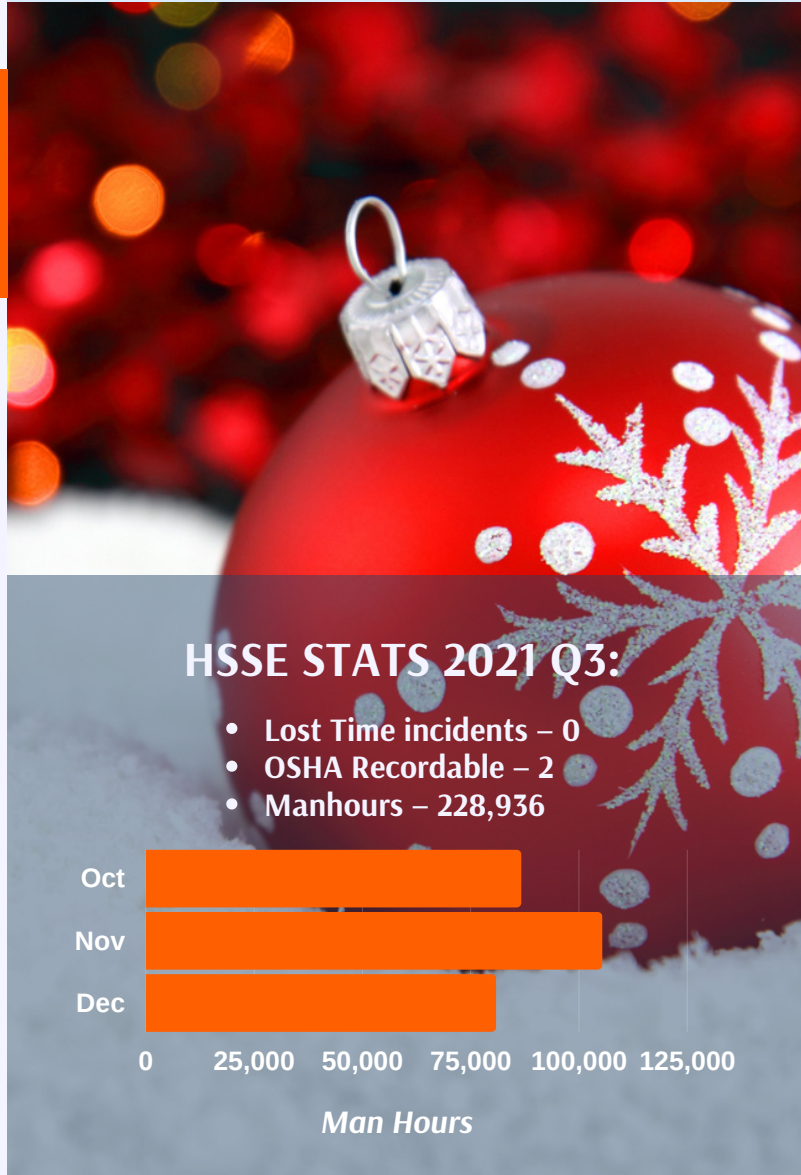
TOSL is fully aligned to provide innovative solutions in this market as well as do our part to reduce our carbon footprint. We have optimized our compressors on the Mobile Offshore Production Unit (MOPU) to minimize flaring and we will be conducting an energy audit in 2022 to determine our energy usage and mitigation. TOSL has also continued to explore opportunities for projects under our 2012 agreement with the UNFCCC, which will eventually allow us to export carbon units under Article 6 of the Paris Agreement.

Our 2021 to 2025 strategic plan continues to progress throughout 2021 into 2022. We have achieved 60% of our planned progress for 2021 using the balanced scorecard as our strategic management performance metric. Phase 2 of our restructuring plan was completed, further consolidating our 3 distinct operating lines of business: Sales, Execution and Engineering & Innovation.

TOSL continues to adapt to the new ways of working through technological advancements and the use of virtual platforms. Our online meetings have become quite interactive and informative, adventuring into new realms to keep persons engaged. We facilitate our client's requirements by using technology to remotely perform commissioning and maintenance works.

As we continue to work assiduously in this challenging environment, I wish to thank each person for their commitment and perseverance to ensure the success of our organization. As we welcome 2022, our focus is still to continue positively influencing how maintenance is done locally and regionally, always seeking out the latest technological innovation and ways of working to bring savings to our valuable clients.

Ricardo Mahadeo  
**Managing Director**



## Report It!



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**

# HSSE LESSONS LEARNT



## 1 What happened?

A discussion was held with a scaffold crew and their Foreman on erecting a suspended scaffold approximately 50ft from ground level. Work began contrary to the plan. The Client observed the crew not using the appropriate PPE (beam straps) for the work area and requested the crew to descend the scaffold. On descending, the crew was not tied off to an appropriate anchor point - HIPO Near Miss.

## 2 Immediate actions

- Job immediately stopped and stand down held - importance of working to plan and the need to reassess risks once job scope changes.
- Temporary removal of crew from site, pending investigation.
- Increased site supervision.
- Initiate accident investigation protocol.

## 3 Downtime

- An hour work time for the work crew including Foreman, Supervisor, Safety Officer and Client.

## 4 Initial Lessons Learnt

- If the work plan is changed, the work must be stopped, reassessed and the new plan approved before continuing work.
- Reiterate that ALL TOSL employees have the power to stop the job.
- Adopt new measures to improve knowledge transfer within the Team to encourage positive behavioural changes.

## 5 Communications

- Share Initial Incident Notification with all TOSL's work crew on different sites.
- Share lessons learnt post investigation with TOSL's team.

# QUALITY LESSONS LEARNT

## Quality

1

### What happened?

Site inspections was conducted at the Client's site, the structure which were painted includes handrails and a ladder cage. During inspection it was observed that coating which were used for the topcoat (colour yellow), was transferred onto the ladder rungs by the means of drips, when painting the handrails and the edges of the topcoat were overlapping onto the existing coating, colour black.

2

**CONSEQUENCES** - Use of extra manpower, consumable and cost to clean and remove excess drips of paint from ladder and overlap coating.

3

### ROOT CAUSE:

- Inadequate site supervision.
- Improper painting technique.

4

### CORRECTIVE ACTION

- The site Foreman was informed immediately and a walk through was completed identifying the findings.
- An awareness session was conducted.
- Paint tape was used to ensure stripe painting were done neatly.
- Paint drips was removed using solvent.
- Plastic wrap was used to protect surrounding structure to prevent paint transfer. • To implement a system to ensure site supervision is adequate

5

### LESSONS LEARNT:

- To ensure all jobs are planned before commenced on site.
- Ensure all workers are qualified and experienced to perform task.

# PRODUCT SPOTLIGHT

BLACKMER

## SLIDING VANE PUMPS



Blackmer positive displacement pumps have revolutionized the pumping industry with their unique sliding vane technology. This revolutionary rotary vane design allows the pumps to self-adjust for wear to help maintain flow rates. This sliding vane pump design creates excellent self-priming and dry-run capabilities, while also providing sustained performance and trouble-free operation. Blackmer Sliding Vane Pumps provide numerous inherent advantages for users due to this rotary vane design, and being a positive displacement pump, among them are the following:

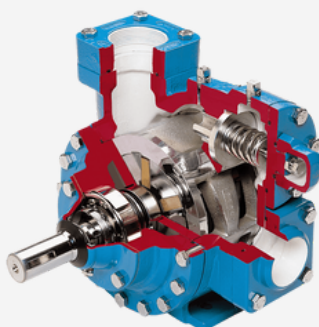
- Unique sliding vane pump design self-adjusts for wear to maintain flow rates
- Excellent at self-priming, eliminates expensive priming systems
- Extended dry-run capability, eliminates nuisance current monitoring systems
- Sliding vane design provides sustained performance and trouble-free operation
- Easy maintenance: vanes can be easily replaced without removing the pump from the piping system
- High suction lift abilities that exceed 25 feet (7.6 meters) and line-stripping capabilities to completely empty tanks, and piping of fluid
- Low maintenance and low life-cycle costs, pumps are renewable and repairable
- Solids handling, provided by large displacement and slow internal velocities
- Thin to thick fluid viscosity flexibility, eliminates expensive heating systems
- Highly efficient, sliding vane pumps require less horsepower than other pumps, meaning spending less on motors initially and less on electricity to power the pump



### LGL SLIDING VANE PUMPS

**For Use In LPG & NH<sub>3</sub> Applications**

LGL Series Sliding Vane Pumps are UL listed for use in propane and ammonia (NH<sub>3</sub>) service and transfer applications. Utilizing an innovative sliding vane design, the LGL Series of positive displacement pumps offer the best combined characteristics of sustained high-level performance, energy efficiency, trouble-free operation, and low maintenance cost.



### SGL SERIES SLIDING VANE PUMPS

**For liquified gas and transfer operations**

Blackmer SGL pumps are designed for the liquid transfer or recirculation of refrigerants and other liquefied gasses. Available in six sizes with capacities of 4 to 300 gpm (15 to 1,135 L/min), constructed of shock-resistant ductile iron and available with a wide variety of seal materials, an SGL pump is the pump to use for almost any liquefied gas application.



### CRL SERIES SLIDING VANE PUMPS

**For Liquified CO<sub>2</sub> Applications**

Capacities from 5 to 22 U.S. gpm (19 to 83 L/min.), and are ideal for loop systems and low volume transfer applications. Designed for foot-mounting to a common baseplate. CRL Sliding Vane Pumps are widely used for bulk-transfer and recirculation applications which include industrial and food-processing systems, refrigeration, process plants and transport loading and unloading.

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# PRODUCT SPOTLIGHT

DEZURIK

## VALVE SOLUTIONS

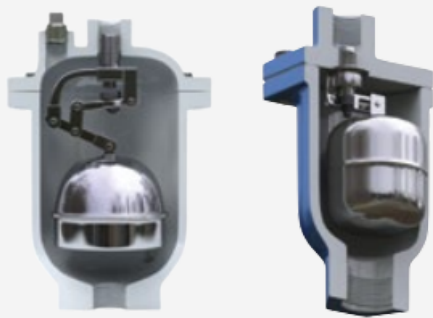


### DEZURIK UNINTERRUPTED SEAT RESILIENT-SEATED BUTTERFLY VALVES (BOS-US)

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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# TOSL ANNUAL CHRISTMAS CHARITY DRIVE

TOSL's charity drive has been going for 15 years. We continually support missions of goodwill, and promoting philanthropy, all while spreading love throughout our community! 2021 was no different, we donated over 100 hampers to families throughout Trinidad.

We had a phenomenal time donating so much! We can do so much to help those in need, and we're so happy to give back to those less fortunate than us.

Check out photos of our recent #charitydrive! We donated clothes, toys, goods, and other household essentials to over 50 families in need. Giving with love: TOSL's way of life



## CASE STUDY: Online Monitoring Changeout



The Client sent out a tender to replace their existing online monitoring GE Adre system in 2019. TOSL representatives being on site and knowledgeable about vibration analysis contacted the relevant personnel TOSL responsible for the product that would be an adequate replacement. TOSL would have reached out to the customer asking if they would consider another brand the Brüel & Kjær Vibro VC-8000 SETPOINT CMS.

To aid in the solidification of their choice, TOSL would've set up a virtual meeting with the end user of the client's company and the engineers of the proposed substitute equipment to be offered. The end users were quite pleased with the capabilities of the equipment as it offered more options for better analysis than their existing equipment. They were also pleased as it came at a price point that was less than what was expected.

The Brüel & Kjær Vibro VC-8000 SETPOINT CMS system was selected for the task of condition monitoring the equipment, as well as providing automatic decision support for diagnostics. One of the main reasons for selecting this system was it already had a process information interface with the existing ADRE software. This means vibration data can be stored and viewed in the PI system together with process data. No proprietary database server is needed, and user management is more accessible without restrictive licensing. Moreover, the process data can be correlated together with the vibration data, so it is easier to see which events are process-related and which are an indications of deteriorating machine health. One of the key aspects of the system's PI interface is that time waveform data can also be stored in the PI system. This means events can be manually post-processed at any time using the Setpoint diagnostic technique package, or by third-party systems.

In addition to manual diagnostics, there is an automatic system as well. The use of this system provides enterprise-wide operational intelligence for process optimisation. This is achieved through production performance analysis of the process, which ultimately results in reducing IT support costs, improving scheduling efficiency and reducing equipment downtime. FactoryTalk Analytics, which is interfaced to the PI system, uses much of the data from Setpoint for asset maintenance management.

The client subsequently accepted the offer of the replacement, and the purchase order was sent to initiate the procurement process. TOSL delivered the equipment to the client and offered user training for both the end user and TOSL representatives in a bid to lend extra 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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