

NEWSLETTER

April 2022 to September 2022

From the Partner's desk

We wish everyone a great and prosperous new year 2023. In this newsletter, I am pleased to present our developments and achievements in the first six months of the financial year 2022- 2023.

In cricketing terms, we raised our bat after completing a half-century last year and took fresh guard to focus on the upcoming challenges and opportunities. Our strategy is driven by our vision to celebrate "75" years of excellence in 2046, facilitated by long-term decisions for sustainable growth. The first six months can be best described as a period of "consolidation" focusing on green energy, export focus and product development.

We completed the second phase of our Solar Power Plant on the roof of our manufacturing facility, reiterating our pledge to go Green. The second phase capacity of 315 kW augments the initial capacity of 400 kW commissioned in January 2021. We have launched four new product designs to upgrade and expand our product range, mainly focusing on industrial and medical gases. Several more products are awaiting certification in the coming months. We participated in exhibitions and business conferences in India and overseas to showcase our products and engage with our customers.

IS 3224:2021 was published last year and could potentially disrupt the Industrial and medical cylinder valve industry. Our cover story features this development and informs readers how it is a step in the right direction to enhance safety for end users.

Lastly, our founders, Y. K. Behani and N. K. Behani were conferred the 'Baroda Sun Achievement Awards 2022' by the Bank of Baroda in the category of "MSME tech" on its 115th Foundation Day for "Excelling in the field of high-pressure Gas Cylinder Valves manufacturing for the Indian and global markets".

I hope you enjoy reading this newsletter while continuing to support us and our commitment to adding value to all our stakeholders and positively contributing to society.



Renu Behani
Partner
Tekno Valves



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New Cylinder Valve Standard Set to Disrupt India's Industrial & Medical Packaged Gas Industry

After two decades, IS:3224:2021, the 4th revision of IS 3224- Cylinder Valve specification for Compressed Gas Cylinders dealing with Design requirements, Type testing and Production testing, was published earlier this year.

The new standard is aligned with ISO 10297:2017, the international standard for Gas Cylinder Valves - Specification and type testing, which is also referenced in ADR and Transportable Pressure Equipment Directive (TPED).

The 3rd edition, IS:3224:2002, mainly focused on inlet and outlet connections and type testing requirements for design qualification were not sufficiently elaborated.

IS 3224:2021 focuses on the reliable and smooth functioning of the valve operating mechanism and enhanced safety with an emphasis on design qualification.

The new standard's most stringent and time-consuming test is the Endurance test requiring at least five test samples to be tested for 2000 cycles at maximum test pressure at defined torques depending on the valve design. In addition, an Excessive Torque Test ensures that the valve operating mechanism can withstand sufficient over-torque and fails safely above a specified threshold.

Our competitors in India have only been offering single spindle-packed design valves, which would not meet IS 3224:2021 as these designs would fail between 300-500 cycles during endurance testing.

On the other hand, we have already been offering O-ring seal design valves certified to ISO 10297 since 2008; these would easily meet the newly published standard.



Most of our quality-conscious customers are already using O-ring seal design valves. However, some companies insist on using old-design valves despite our efforts to educate them about the safety, performance and benefits of O-ring seal design valves.

IS 3224:2021 challenges the status quo of valve manufacturers/users who have not embraced design changes in cylinder valves and continue to manufacture/use cylinder valve designs that have remained unchanged for over 50 years !!

Cylinder valves are silent centurions of the gas industry. Just because they are prone to abuse in the field

and sometimes get damaged before reaching their optimum life cycle, they don't deserve to be treated as commodities.

There is much to gain in selecting and using superiorly designed, high-quality gas cylinder valves. On the other hand, there is a lot to lose by using an inferior product. As cylinder valves are essential to promote public safety, their catastrophic failures would lead to safety issues, and leakages will be detrimental to the environment and people. Poor life from cylinder valves would result in a high cost of ownership.

IS 3224:2021 is aimed at making the industry safer and more productive.

As the transition period is approaching, the clock has already started ticking.

Once the dust settles, the biggest beneficiary from IS 3224:2021 will be the small and medium gas plants which have not demanded much from their valve manufacturers.

New Generation cylinder valve designs qualified as per IS:3224:2021



Rohit Behani
CEO and Partner
Tekno Valves



New Product Developments



We continuously strive to innovate, improve and develop new products for our customers who expect nothing short of world-class quality from us. In the last six months, we have launched four new series/ designs for industrial and medical applications which are covered in this section.

SWN-12/D & TWN-12/D

Side Outlet & Top Outlet

Wheel Operated Cylinder Valve in O-ring Seal Design

Released on March 2022
Certification EN ISO 10297:2017 & CGA V-9:2019
Application Acetylene
Pressure rating 60 bar

Product Features

- PEEK Soft seat & thrust washer offers excellent chemical and mechanical properties and is resistant to weight loss
- Hydraulically tested at 909 bar to withstand acetylene detonation
- Valves will seal metallurgically if the soft seat is burnt



BHN-12/N

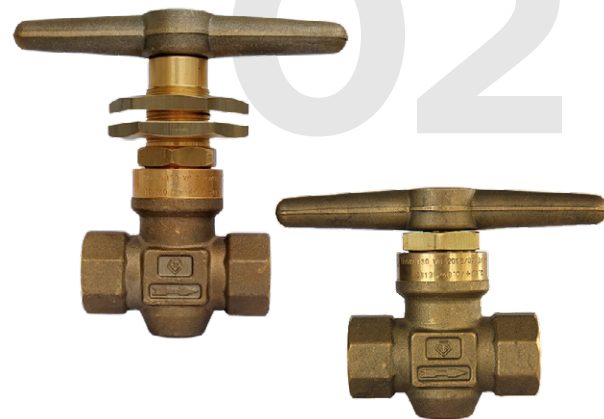
Panel Mounting Valves & Standard Valves

Soft Seat Master Shut-off Valves for Manifold & Bundles

Released on April 2022
Certification EN ISO 10297:2017 & CGA V-9:2019
Application Gas manifold and piping systems
Pressure rating 450 bar

Product Features

- Available in PA 66/ PEEK/ PCTFE seating
- Optionally available in Panel mounting version



BSKN-12/O & BTKN-12/O

Side Outlet & Top Outlet

Key Operated Cylinder Valve in O-ring Seal Design

Released on July 2022
Certification EN ISO 10297:2017 & IS 3224:2021
Application Industrial & Medical gases
Pressure rating 400 bar

Product Features

- Uses PEEK soft seat & thrust washer having excellent mechanical properties and resistant to wear caused by high torques in service.
- Eliminates "spring" inside the operating mechanism
- Spares are available in sub-assembled condition for simple & fast maintenance

BPKN-12 & BPTN-12

Toggle & Key Operated Pin Index Cylinder

Valve in O-ring Seal Design

Released on September 2022
Certification EN ISO 10297:2017 & CGA V-9:2019
Application Medical gases
Pressure rating 250 bar

Product Features

- PEEK thrust washer is capsuled with the upper spindle & acts as an anti-friction ring for low torque operation
- Certified for use in an MRI environment up to a 3-Tesla Magnetic Resonance system.
- All valves are marked MR Conditional as per ASTM F-2503.





Solar Power Plant

2ND PHASE COMPLETION

We have completed the second phase of our Solar Power Plant reiterating our pledge towards going Green and contributing toward a Sustainable Future. The second phase capacity of 315 kW augments the first phase capacity of 400 kW and consists of 2137 panels and six 100 kW inverters and will help save 52000 trees and 660000 kgs of CO₂ emissions annually.

Scaling Up Capacity



Forging Electric Screw Press 400T with 125 kW Inductotherm Induction Heating system

Make Zibo Sangde Machinery Equipment Co. Ltd., China
 Model SD20E-400 with PLC control

Technical Specification

Nominal Pressure	4000 kN
Max. Slider Stroke	650 mm
Table Size	1000 X 950 mm
Feature	Core forging option

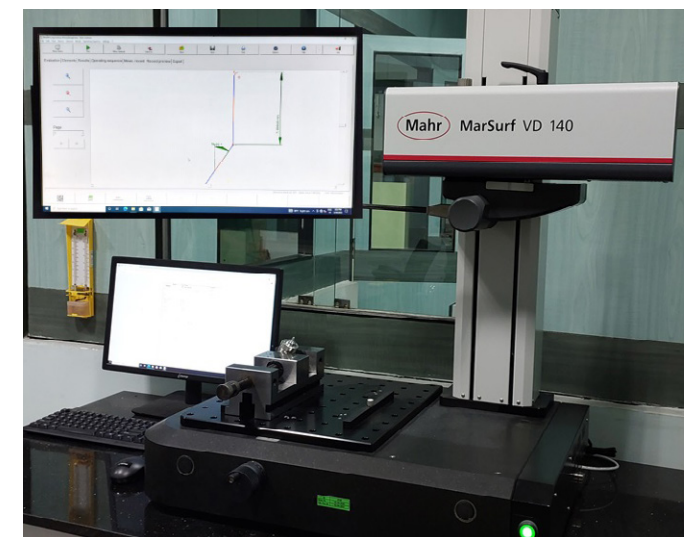


Handwheel Assembly Machine

Make – M2Nxt, Bangalore

Features:

- Different stations for each part of the handwheel assembly with dedicated station for adhesive dispensation
- Electric nut runner delivers precise torque to the handwheel nut.
- Poke Yoke design ensures the highest level of reliability and convenience for the operator.



Contour and Surface Measurement Machine

Make Mahr, Germany
 Model MarSurf VD 140

Features: Fast axes, reproducible starting point and fast, toolless probe arm change. Its contour probe system can measure roughness > 2 microns and its BFW probe system is suitable for high-precision roughness and waviness measurement tasks.



Baroda Sun Achievement Awards

20TH JULY 2022

Our founders Y K Behani and N K Behani were conferred the 'Baroda Sun Achievement Awards 2022' by Bank of Baroda in the category of "MSME tech" on its 115th Foundation Day for "Excelling in the field of high-pressure Gas Cylinder Valves manufacturing for the Indian and global markets"

The award, which came with a cash prize of Rs 2.5 lacs was presented to five inspirational individuals/ companies, in the category of Start-up, MSME Tech, Agri Tech, Social Service and Nature/Wildlife Conservation in a glittering ceremony in Mumbai.

The winners were selected based on their significant contributions in their respective fields, substantial impact on society and inspiring others through their journey.



EVENT PARTICIPATIONS

11th Euro Chlor International Chlorine Technology Conference and Exhibition

3-5 MAY 2022 | WARSAW, POLAND

Tekno Valves participated as an exhibitor in the "11th Euro Chlor International Chlorine Technology Conference and Exhibition" from 3-5 May 2022 at the Double Tree by Hilton Hotel & Conference. Our European distributors also joined the exhibition and conference which was well attended by delegates from round the world.



Seminar on Medical Oxygen supply systems Learnings from Covid

15TH SEPT 2022 | NEW DELHI, INDIA

Tekno Valves participated in the Annual Safety Seminar on Medical Oxygen Supply Systems organised by Gas Industries Association (GIA) in New Delhi as a Gold sponsor and exhibitor.



Coffee Table Book Acknowledgments

YOUR APPRECIATION IS OUR JOY

Tekno Valves' Coffee Table Book celebrating its golden anniversary and capturing the remarkable journey and achievements was very well received and appreciated by our customers and stakeholders.

In this section, we present some reflections and snippets received from our patrons. Sincere thanks for your kind words and for energizing us no end.

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“I received Tekno's Coffee Table Book. What a way of narrating Tekno's 50-year history. Very well captured, well narrated. I like the most in the book is the level of honesty and openness in narrating the stories. Because of the purity in the messages, each message touched my heart. This book is another example of whatever Tekno does, it will leave a mark with a class. Thank you and wish Tekno Family once again all the very best for many-many more years to come”

ANBU K
Technical Manager, IXOM Limited, Australia



“Just completed reading entire commemorative Coffee Table Book. I bow in front of Rohit for being such a visionary. Will make sure my kids also read it and learn from it.

I have seen several handbooks like this and I am sure big corporates can never come out with this type of detailed book complete in all aspects, not able to find any more words to congratulate you. Really feeling very happy and proud of Tekno Valves”

Sunil Harlalka
Partner, Suman Enterprise, India

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“We received the Commemorative Handbook for the 50th Anniversary you sent to us, we just wanted to thank you for sharing with us the brand history and achievements. We really appreciate it”

Luca Melanciana
Area Sales Manager, Union Spa., Italy

“We at M/s Indian Refrigeration Stores & M/s Deepak Trading Co would like to Thank you for remembering us in your 50 Years celebrations. The Coffee Table Book is very well curated & The quality shows the high regards for aesthetics. It has been a pleasure being versed with your history. We assure you of our best patronage & wish you all the very best while wishing you a Century.”

BK Kukal & Sankalp Kukal
Director
M/s Indian Refrigeration Stores
& M/s Deepak Trading Co, India



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“Very nice Coffee book, the content shows how much hard work is put by Rohit and his team. Really appreciate your hospitality and taking care of us so well during our trip. Will cherish this trip for long.”

Pradeep Saini
Head (Container Group)
ISGEC Heavy Engineering Ltd., India

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“I completed reading the beautiful Coffee Table Book and thoroughly enjoyed every part of the Book and learning the story of your company. I was particularly touched to come to know the generations of your family, and the history of Tekno Valves from its humblest beginnings. I felt like I was sitting in your living room and was listening to me as you shared the story of the first 50 years of Tekno Valves, and for that I am so grateful. For me, a very enjoyable highlight of the Book was to take a tour through your plant and see how the numbers 12 and 7 continue to play an important part in valve manufacturing. While I had hoped to be able to visit your plant during my Matheson years, I felt from the detailed photos and explanations, that I was afforded that visit via the page of the Book.

Your comments about the value of the collective work we do at CGA, ISO, and other standard developing organizations will no doubt foster confidence in the important work we are able to accomplish at these meetings. Indeed, the whole is greater than the sum of its parts. This is synergy at its best. Thank you for including that as an integral part of the Book. And I am honoured that some of the things we shared as we interacted through the years were worthy of being included in this beautiful commemorative history of the genesis and growth and future of Tekno Valve. It is an honour to know Rohit and work with you at CGA and ISO.

Keep up the fine work, and again, my heartiest congratulations to each of you and all those at Tekno Valves on this very important milestone!”

Jerry Sameth
Technical Manager
Compressed Gas Association, Inc., USA

“I really appreciate your Coffee Table Book which is interesting and informative. Congratulation!!!! On completion of Golden Anniversary”

Vashu Ramsinghani
Managing Director, Rama Cylinders Pvt. Ltd., India



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“Thank you for sending me Coffee Table Book - Tekno Valves - 50 years of excellence. Found it so absorbing that I finished reading in one evening. Beautifully compiled with interesting anecdotes and memorable stories. I could relate to the journey since have been following Tekno Valves initially during my Asiatic day's way back in mid 80's which after a gap continued when Rohit started attending ALLGMA seminars. I still remember Rohit's first years of participation - every time with lots of enthusiasm and your sharing take-aways from each seminar so also your growth stories. Seeing the same packed in one book was not only very interesting but also extremely inspiring.

My regards to Shri Y. K. Behani whom I am fortunate to know for around 40 years and salute to whole Behani family. My special congratulations to you and not to forget Renu whose involvement allowed you to travel the seven seas and expand. My very best wishes for Tekno Valve family which I am sure will in due course celebrate century of excellence”

Munjal Mehta
Founder Director
SHELL-N-TUBE Pvt Ltd, India



"The coffee table book has been very well made with all details and especially the background of the start in 1972 just after war and in Kolkata being a courageous step as also all the process being depicted very well with photographed images. It is a book for a layman also to know how a valve is processed. Great focus on all aspects in this book to say the least.

On behalf of AMPI team I am sure the company will reach greater heights and celebrate with aplomb Platinum and Diamond jubilees will have a grander get together to show the further progress. Pleased and proud to be associated in a small way and be a part of your supply chain."

Rajesh Shah
Managing Director
AMPI Agencies Pvt. Ltd., India



"I want to express my appreciation and thanks for receiving Tekno Coffee Table Book celebrating their golden anniversary. It says a lot about a company which has reached half a century on the founder's aspiration and the ability of the newer generation to carry on that spirit.

On that note, I wish to convey on behalf of our organization our congratulations and many best wishes for your future successes. We shall keep this copy in our company library and again am happy to again link up with your company further for good business."

Stephen Lim
Managing Director
Lutz-Jesco East Asia Sdn Bhd, Malaysia



"I am thankful to receive the Coffee Table detailing the "50 years of excellence" at Tekno Valve. It is extremely well done, but I expected nothing less, and I compliment your team for the high-quality presentation of Tekno Valve and its history.

I hold Rohit and Tekno Valves in very high regards and welcome the opportunity to represent your products."

Russ Snyder
Regional Sales Manager
Tekno Valves North America, Inc., USA



"I received the coffee table book and convey my hearty congratulations on the Golden Anniversary of the Company. I have gone through the book, and deeply appreciate the idea of coming up with the book. You all have taken great efforts to prepare the book. It is a very fine collection of Technical History, Family Contributions, Emotions, Success blended with humility, and what not. At the End, a great piece of work.

Once again congratulations on this great feat and all the best wishes to you all and of course your team at Tekno valves. I am glad that we are good friends and was able to closely observe you during our association at ME 16 meetings."

Pramod Samvatsar
EKC International FZE,U.A.E.



"Today I came back to the office after several days off and I had on my office table the Commemorative handbook of the subject. It was a very happy surprise for me.

Thank you very much for the book and I await to keep on working with your great company for a lot of years more. Thank you very much and all the best"

Juan Bouza García
GAUZÓN IBÉRICA, Spain



"Rohit, I've received your book, thank you very much. I'm really under big impression your firm. My congratulations for your company and family for successfully long history.

I wish, your future history will be built by you and your successors for many, many years."

Piotr Polak
TECWELD Piotr Polak, Poland



"Rohit, I finally put down a real page-turner of a book, AKA the 50-year anniversary gift that you sent me. I was more than impressed with the achievements of yourself, your team and all your antecedents who brought Tekno valves to where it is today.

You must be justifiably proud of the family heritage and how you have advanced the business with all your hard work and undoubted passion for gas valves. If Tekno valves is a test side, then the openers saw off everything the hostile bowling could throw at them and now the middle order are compiling a test-winning innings.

Keep up the good work and congratulations on a job well done."

Tim Cooke
Managing Director
E&J Tooling LTD, UK



"Recently had the opportunity of going through your "Coffee Table Book" published on the occasion of 50th Anniversary of Tekno Valves. Thought of sharing my first-hand emotions with you after reading the book.

Much more than a "Coffee Table Book", it is a saga of struggle, hope, success & growth of your esteemed Organization and aspirations of the beautiful minds behind it.

In the present times, where everybody seems to be chasing immediate success, the story of your constant pursuit of excellence is a source of inspiration for us and is a proof that the power of sincere contribution can deliver life's deepest joys. We are truly obliged in finding a place in your growth story. Wish you and your organization shine as always."

Sitanshu Dash
Chief Manager
SME Branch, Bank of Baroda, India

"Thank you for sending a copy of the Tekno Valves coffee table book – what a fantastic way to memorialize your golden anniversary! Congratulations on achieving this milestone.

I helped put together CGA's anniversary book, so I have a sense of appreciation for how much work goes into something like the coffee table book. I wish you the best for continued success!"

Laura Brumsey
Vice President, Operations & Administration
Compressed Gas Association, Inc., USA



The Annual Packaged Gases Issue of Gasworld

Gasworld's Global Edition - Packaged Gases Issue 205 May 2022

On the eve of its annual Packaged Gases Issue, gasworld caught up with India's Tekno Valves – having last year celebrated its golden anniversary – and CEO Rohit Behani to talk cylinder valve trends and talking points.



EXCERPTS FROM THE INTERVIEW



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“We are seeing lots of activities in alternate fuel sources like CNG and hydrogen. India has pledged heavily to invest in these gases. Hydrogen is a hot topic globally but also in India.

We provide CNG valves for cascades, and our current approval for hydrogen valves is up to WP-450 bar. We are developing hydrogen valves that will be rated for WP- 700 bar. We have several new products getting ready to be launched soon, and we are excited to speak about them the next time we meet.”



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We are committed to preserving the environment by reducing our energy, water, and waste. To reduce our carbon footprint, we have recently invested in expanding our solar energy installation from 400 to 715 KW.

We have completed Phase I of the rainwater harvesting, involving the construction of drains and underground pipelines to store rainwater through filtration in a 90,000 litre WC reservoir, to allow approximately 60% of the collected water to recharge the aquifers and replenish groundwater. Last but not least, we have created Tekno Valves Foundation with the charitable objective to advance education, health services, and social amenities for those in need.

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We try not to milk the status quo but always keep improving our products and educate our customers about the safety, performance, and low cost of ownership of valve designs that meet international approvals.

