ARIHANT

# Arihant स्पर्श Newsletter

## A Touch of Excellence, Every Month

OCTOBER 2025

# TABLE OF CONTENTS

# MESSAGE OF THE MONTH

ARIHANT

## Diwali: A Reflection of the Light We Create Together

**Amit Jain (Founder)**

As we approach the festival of lights – Diwali, I take this moment to share a thought that goes beyond celebration and connects with the very foundation of our organisation.

Diwali is not just about lighting lamps, bursting crackers, or exchanging gifts. At its heart, it represents the triumph of light over darkness, knowledge over ignorance, and good over evil. It reminds us that no matter how deep the darkness may seem, even a single Diya has the power to bring hope, clarity, and direction.

In much the same way, within an organisation, every individual is like a Diya – a source of energy, positivity, and illumination. When each of us contributes with honesty, dedication, and responsibility, our collective light makes the organisation shine brighter and achieve greater heights.

At Arihant, every department adds its unique glow to our collective brilliance. Sales & Marketing spread our light across markets, R&D ignites innovation, and Operations ensure the flame never flickers. Finance & SCM balance resources to keep the lamps burning bright, while HR & Admin nurture the spirit that sustains our glow. Together, these Diyas dispel darkness and make Arihant shine with remarkable strength and unity.

This Diwali, let us embrace its true essence at Arihant — by replacing confusion with clarity, fostering openness, uniting our diverse talents toward a shared mission, and igniting a spirit of renewal that drives innovation, progress, and growth for all.

If we carry the spirit of this festival into our professional lives, I am confident we will continue building a legacy that is not only remarkable but also deeply inspiring.
I wish all my colleagues a
Happy Diwali & a Bright New Year!

# SPOTLIGHT OF THE MONTH

ARIHANT

## Featured Articles

**Dive into this month's insightful articles, covering industry trends, innovations, and expert perspectives. Stay informed, stay inspired, and explore ideas that drive excellence at Arihant Electricals.**

---

Sudhansu Sekhar Samal
(VP Sales & Mkt)

## 1. The Snake Hole: A Lesson in Leadership

During one of my college bus rides, I overheard an old village fellow in his sixties narrating a story relating the then political situation in Odisha. At the time, it struck me deeply. Over the years, I've realized that its meaning goes far beyond politics into organizations, teams, and leadership.

The story goes like this:

In a quiet village by the banks of a serene pond lived a group of harmless snakes. They dug small holes along the water's edge and lived peacefully. The villagers, however, often came to the pond to hunt for crabs. Mistaking the snake holes for crab burrows, they would push their hands inside. Whenever they accidentally pulled out a snake, they would throw it away quickly, leaving the poor creatures injured and humiliated.

Day after day, this continued. The snakes lived in constant fear and pain. Though they were innocent, they had no way to protect themselves.

At last, they went to the Cobra, the king of snakes, feared and respected for his venom. They pleaded: “O Great King, help us. The villagers keep troubling us endlessly. If only they knew we are harmless! Can you teach them a lesson?”

The Cobra thought for a moment and said, “Tomorrow, I will take one of your places. I will bite the hand that dares disturb us. One sting of fear will ensure no one troubles you again.”

True to his word, the Cobra slid into one of the narrow holes. Soon, a villager reached inside. In an instant, he pulled his hand out and before the Cobra could strike, the villager tossed him aside like the others. The Cobra was shaken; he was powerful, venomous, and swift; yet in that cramped space, he was just as helpless as the harmless snakes.

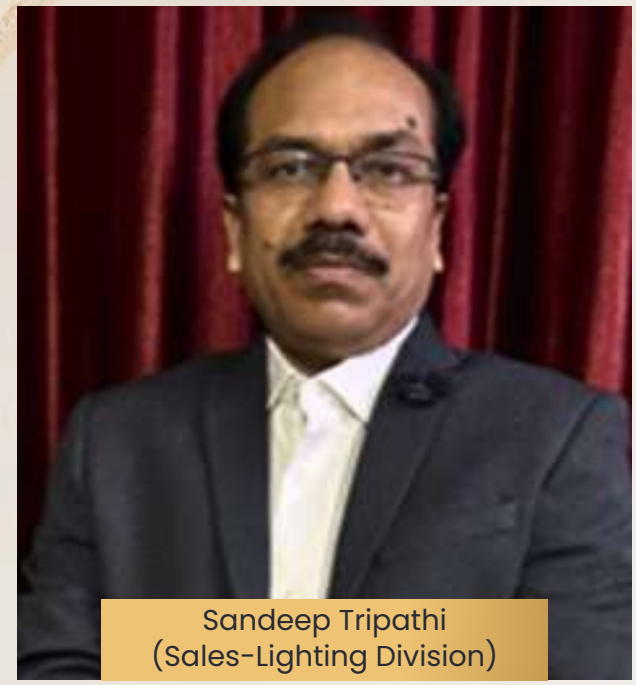
He returned to his followers and said: “My children, it is not your weakness that leaves you vulnerable. The fault lies in the hole itself. It is too small to allow any snake whether venomous or harmless to defend itself.”

So, the snakes widened their holes. With more space, the Cobra coiled inside with his hood raised, ready to strike. The next time a villager came near, one glance at the menacing figure was enough. None dared to reach in again. Peace returned to the pond; not because of fear alone, but because the snakes had fixed the real problem.

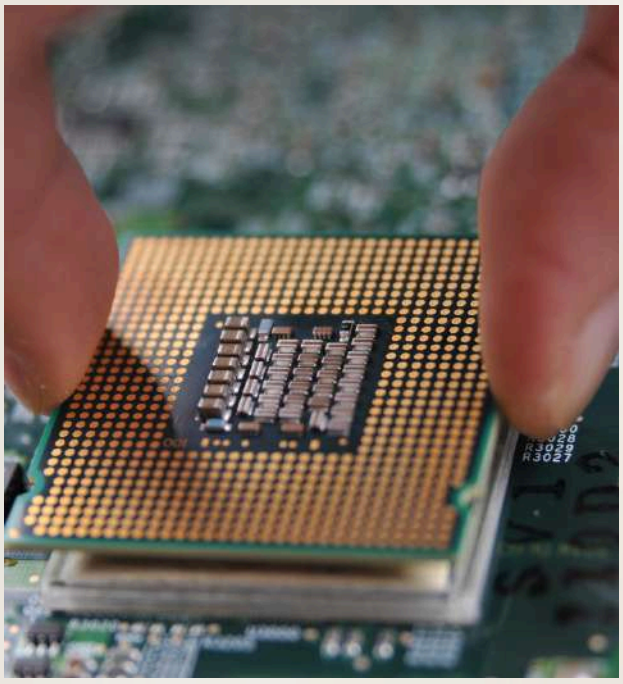
**The Lesson:**
The story reminds us that real change begins when everyone works to improve the system, not just a few at the top.

It’s easy to blame individuals or leadership, but lasting progress comes when all take responsibility: re-examining existing habits/process, suggesting better ones, and supporting each other.

Like the snakes who widened their holes together, teams thrive when people collectively shape an environment that allows everyone to succeed.



Sandeep Tripathi
(Sales-Lighting Division)



# 2. The Light Fantastic: A Revolution in a Tiny Chip:

It's time to stop thinking of the LED (Light-Emitting Diode) as just a fancy, long-lasting light bulb. It's a fundamental shift in how we create light. Unlike old-school incandescent bulbs, which literally burn out by heating a tiny wire (a huge waste of energy!), an LED is a semiconductor, a tiny chip that glows when a current passes through it. This simple, solid-state process is what makes it so incredibly powerful, efficient, and versatile. It's the core of a lighting revolution that is still very much in progress.

**The Unbeatable Efficiency and Staying Power:**
The key reason LEDs conquered the world is their efficiency. They convert about 70% of the energy they consume directly into light, with minimal heat loss. Compare that to an incandescent bulb, which wastes nearly 90% of its energy as heat! This means drastically lower electricity bills for everyone. Furthermore, an LED can last an astonishing 25,000 to 50,000 hours, sometimes more. That’s years and years of use before you even need to think about a replacement, making them a champion for both your wallet and the planet.

**Smarter Homes, Brighter Cities: The IoT Connection:**
The latest chapter in the LED story is all about intelligence. We're living in the age of the Internet of Things (IoT), and LEDs are now fully integrated. New smart LED systems can connect to your Wi-Fi and be controlled from your phone or smart home hub. This isn't just about turning the lights on or off; it's about automation, where lights respond to your presence using built-in sensors, or even dim themselves to save power when the room is empty. Smart city planners are using this technology in streetlights to create efficient, connected grids that adjust brightness based on traffic and weather.

**Human-Centric Lighting: The Wellness Trend:**
One of the most exciting recent trends is Human-Centric Lighting (HCL). We've learned that light does much more than help us see; it actively affects our health and well-being. HCL uses specialized LEDs, often called "tunable white" systems, to mimic the natural cycle of the sun. In the morning and throughout the workday, the lights cast a cooler, bluer-white light to boost alertness and productivity.

**Syncing with Your Body's Clock:**
Then, as evening approaches, the system automatically shifts to a warmer, softer, yellowish light. This supports our natural circadian rhythm—our internal body clock—by reducing the blue light that can suppress the production of melatonin, the hormone that tells our body it's time to sleep. You'll find HCL systems popping up everywhere, from hospitals to corporate offices and even high-end homes, all striving for a better balance between technology and biology.

**The Mini and the Micro: Display Technology's Next Frontier:**
LED technology isn't just about general room lighting; it's also revolutionizing our screens. You've likely heard of MiniLEDs and MicroLEDs, and they are the next big leap beyond standard LED-backlit LCDs.

**MiniLED: The Next Generation of Backlights:**
A MiniLED display is an evolution of the existing LCD display. Instead of a few hundred larger LEDs serving as a backlight, a MiniLED screen uses thousands of incredibly tiny LEDs packed tightly behind the screen. This allows for far more precise control over brightness and darkness, drastically improving the picture's contrast, making the blacks much deeper and the bright spots much punchier.

**MicroLED: The True Successor to OLED:**
MicroLED is a completely different beast and is considered the future. Like OLED, a MicroLED display has no backlight at all. Instead, each individual pixel is its own microscopic LED that can turn on and off completely. This delivers perfect blacks, insane brightness, and vibrant colors that are currently unmatched. While MicroLED is still expensive and mostly seen in massive, high-end display walls, its ability to be tiled into any size makes it a game-changer for gigantic cinema screens and future modular displays.

**Sustaining the Future: The Green Footprint:**
The environmental advantages of LEDs are immense. By consuming so little energy, they significantly reduce the demand on power grids, which translates to a smaller carbon footprint globally. Moreover, unlike older fluorescent tubes (CFLs), LEDs are mercury-free, eliminating a major toxic disposal problem.

**Advancements in Materials and Efficacy:**
The research doesn't stop, either. Scientists are constantly exploring new materials, such as perovskites, to create the next generation of LEDs that are even cheaper to manufacture and more efficient than current models. New standards are pushing efficacy past 200 lumens per watt, meaning we are consistently getting more light for even less power, cementing the LED's role as a cornerstone of sustainable design.

**Busting the Myths: Facts Over Fear:**
Despite their dominance, a few myths still cling to LEDs. For one, the idea that "LEDs are too cold and blue" is simply untrue. Modern LEDs offer a full spectrum of color temperatures, from an ultra-warm, cozy glow (around 2700K) to cool, daylight white (5000K+).

**The Heat and Dimmability Debate:**
Another common misconception is that LEDs generate a lot of heat. While the chip itself needs a good cooling system (the metal base of the bulb is a heat sink), the light beam itself is cool to the touch, making them much safer than older bulbs. Finally, the flickering and dimming issues of early models are largely gone; quality LED drivers are now designed to work smoothly with compatible dimmer switches, offering seamless control.

**Light Fidelity: The Next Wave of Connectivity:**
Looking further ahead, another technology tied to the LED is Li-Fi (Light Fidelity). Imagine your ceiling lights not only illuminating a room but also transmitting data. Li-Fi uses the visible light spectrum from LED fixtures to send information wirelessly at speeds potentially much faster and more securely than traditional Wi-Fi.

**The Enduring Impact of the Little Diode:**
From optimizing our sleep patterns with gentle illumination to enabling the creation of cinema-quality screens in our homes, the simple Light-Emitting Diode continues to drive remarkable innovation. It is more than just a light source; it is an intelligent, sustainable, and powerful component that is fundamentally shaping the way we live, work, and connect in the modern world.

ARIHANT


# 3. Demands by Future Railway Converters and How They Change Power Semiconductor Modules

**A Market on the Rise: From $2.73 Billion to $8.47 Billion**

According to the latest data, the global WBG semiconductor power devices and modules market was valued at US$ 2.73 billion in 2024. It is projected to reach a staggering US$ 8.47 billion by 2032, growing at a CAGR of 17.4% from 2025 to 2032.

**What is Advantage of WBG (Wide Band Gap) Semiconductor power devices**

- Higher breakdown voltage,
- Superior thermal conductivity,
- Faster switching speeds—make them ideal for high-efficiency and high-density power applications.

**Rolling Stock Conventional System Design**

- Since the early 1990s , Infineon has been setting trends in developing leading-edge power semiconductor modules and technologies to facilitate innovation in converter design .
- Product offering of traction application, from propulsion converter to auxiliary converters to help design engineers to achieved their design targets.
- Typical topologies for traction sub-applications such as trams, metros, electrical multiple units (EMU), high-speed trains and locomotives.

For FZ1500R33HE3 in IHV-B 140 mm x 190 mm housing has been the basic building block in propulsion converters for applications with 1500 VDC – 2200 VDC links, i.e., metros, EMUs, high-speed trains and locomotives. 1500 A has been the preferred and most commonly available current rating; Infineon raises the bar once again with the introduction of the first 2000 A/3300 V in IHV-B package.


*Figure 2: Increasing nominal current in IHV modules for facilitating inverter design for traction applications*

- The key motivation for introducing the XHP™ platform was to address system requirements for higher flexibility, higher current density and higher efficiency. Additionally, for clean switching, higher robustness and reliability, with a reduction of system costs.
- The XHP™ module family, the XHP™ 2 package is designed for voltage classes of 1.2 kV, 1.7 kV up to 3.3 kV, whereas the XHP™ 3 package is meant for voltage classes from 3.3 kV up to 6.5 kV.
- Both packages have the same footprint of 140 mm in length and 100 mm in width to facilitate the use of a common heatsink profile and homogenous converter platforms.

**Upcoming Future technology trend with Infineon SiC Module:**

- Last few decades, silicon (Si) based IGBT devices dominated high voltage applications such as traction and medium voltage drives (MVD). But now, silicon carbide (SiC) based devices are already widely used for various applications with blocking voltages of up to 2 kV and 3.3kV.
- SiC MOSFET devices can significantly reduce conduction and switching losses while providing higher switching frequencies and increased power densities. These features bring benefits at system level, such as lesser cooling effort, reduction in the size of passive components, and lower switching noise for traction applications.
- Infineon uses the trench MOSFET technology (CoolSiC) that is already proven in the field for 1200 V modules. This technology has been further developed for the 3.3 kV voltage class to address applications such as traction.
- The low inductive XHP 2 package is equipped with 3.3 kV CoolSiC MOSFET technology.

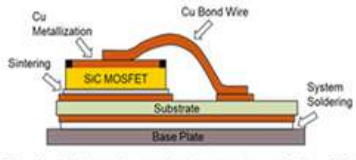


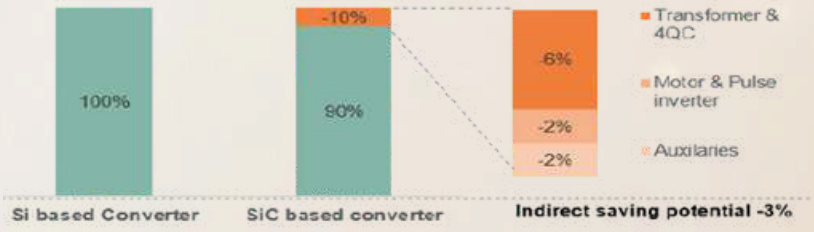

**Fig. 2**: Schematic vertical structure of the 3.3 kV XHP™ 2 package with .XT technology.

- Mitsubishi Electric also unveiled a 1.7kV and3.3kV SiC power module aimed at railway systems and heavy-duty industrial use in February 2025. With embedded cooling technology and a high-density packaging design, this module is designed to perform under harsh, high-voltage environments.

Figure 4
Full SiC Module 3.3kV/750A

Figure 5
Full SiC Power Module NX Type
1.7kV/600A

**Experimental Analysis on Overall System Efficiency Comparison Si Vs SiC in Traction application:**




Efficiency up to 13%
Power density
- Weight % size (10... 25%)
Cooling system simplification
Noise

**Summary:**

Key benefits of combining 3.3 kV CoolSiC MOSFET chips with Infineon's XT joining technology in the low-inductive XHP 2 package. The .XT technology pushes the power cycling limit to a new level for CoolSiC MOSFETs – a crucial door-opener for long-running and demanding applications such as traction. The significant rise in surge current robustness and the ample short circuit withstand capability are additional features that can make Infineon's XHP 2 CoolSiC MOSFET 3.3 kV .XT module the new benchmark in traction.

Pramod Jain
(Sales)

# 4. चुपचाप विदा होते एक वफादार कर्मचारी की कहानी

वह...
जो वर्षों  तक संगठन की धड़कन बना रहा।
हर काम में दिल लगाया,
हर काम में अपनी जान डालता रहा।
कभी छुट्टी छोड़ी, कभी त्योहार भूला,
कभी अपनी खुशी भी पीछे छोड़ दी।

हर बार सोचा,
"एक दिन मेरी निष्ठा जरूर देखी जाएगी।"
शायद कभी उसकी मेहनत की भी कद्र होगी।

पर धीरे-धीरे...
उसकी मुस्कान फीकी पड़ने लगी,
आंखों की चमक बुझने लगी,
कभी उम्मीद जगाई - 'अगली बार मेरी सुनी जाएगी',
कभी खुद को समझाया - 'शायद मैं गलत सोच रहा हूँ'।
उसकी चुप्पी, उसके टूटते मन की गवाही दे रही थी।
और फिर एक दिन वह चुपचाप चला गया।

उसकी विदाई अचानक नहीं थी,
बल्कि यह एक मौन संघर्ष की परिणति थी
लगातार बढ़ती थकान, अधूरी उम्मीदें,
और सुनी न गई बातें।

उसकी खामोशी संगठन को नई सीख दे रही थी ।
इस खामोश विदाई की गहरी गूंज हो भी सुनो ।
निष्ठा की भी सीमा एक होती है...
हर इंसान अपनी हद तक सहता है,
उसके बाद चुपचाप टूट जाता है।
थकान कभी शोर नहीं करती...

बस उत्साह और जुड़ाव को धीरे-धीरे खा जाती है,
आंखों की चमक और दिल की उमंग चुरा लेती है।
भले कृतज्ञता का कोई मूल्य नहीं, पर प्रभाव अमूल्य है...
पदवी से दिल नहीं जुड़ता...
कुछ लोग केवल सम्मान, संवेदना और जुड़ाव के लिए टिकते हैं।
वे नौकरी नहीं, माहौल छोड़ते हैं...
जहाँ कद्र, सुनवाई और सम्मान नहीं,
वहाँ वफादारी भी टिकती नहीं।

संदेश

जिस दिन एक वफादार कर्मचारी चुपचाप चला जाता है,
उस दिन सिर्फ एक कुर्सी नहीं खाली होती,
संगठन का एक हिस्सा भी चला जाता है।
और उस रिक्तता तो भरना सरल नहीं होता ।

कर्मचारियों को सिर्फ काम और आंकड़ों में मत तोलिए,
उनकी भावनाओं, मेहनत और चुप्पी को भी समझिए।
संगठन वही सफल होते हैं,
जहाँ वफादार कर्मचारी खुद को
सुना हुआ, सम्मानित और अपना सा महसूस करे।

अगर हम चाहते हैं कि हमारी टीम वफादार रहे,
तो हमें सिर्फ काम नहीं,
इंसानों को भी समझना और अपनाना होगा।
जहाँ सम्मान और सुनवाई होगी, वहीं सच्ची निष्ठा टिकेगी।

कभी-कभी...
एक सच्चा 'धन्यवाद',
किसी दिल में डगमगाती निष्ठा को फिर से संजीवनी दे सकता है।
किसी थके-बुझे मन को फिर से जीवंत बना सकता है।
याद रखिए, इंसान को सम्मान चाहिए –
सम्मान मिलेगा तो काम खुद-ब-खुद दिल से होगा।
यह सम्मान ही उसकी स्वीकारोक्ति है।

# HIGHLIGHTS FROM EVENTS AND CONFERENCES

## 1. India’s Semiconductor Journey Accelerates at Semicon India 2025

Arihant Electricals attended Semicon India 2025 at Yashobhoomi, New Delhi, where India’s vision to become a “full-stack semiconductor nation” was highlighted. Prime Minister Narendra Modi underlined the strategic importance of semiconductors, calling them the “digital diamonds” of the 21st century, and announced $18 billion in investments secured for 10 projects under the India Semiconductor Mission. Minister Ashwini Vaishnaw showcased India’s first “Made-in-India” chip, the Vikram 32-bit processor, and emphasized the country’s stable investment environment, growing domestic demand, and efforts to build a complete semiconductor ecosystem. This event reinforces India’s emergence as a trusted global hub for semiconductor innovation and manufacturing.

# 2. Arihant Electricals Engages in Indo-German Investment Dialogue

Arihant Electricals participated in the Business Roundtable organized by GTAI in association with IGCC at The Claridges, New Delhi. The event highlighted Brandenburg, Germany, as a gateway for Indian investment into Europe, bringing together industry leaders, policymakers, and experts. Discussions focused on Germany's strengths in Automation, Robotics, Cobots, IoT, AI, and Industry 4.0, alongside sustainable investment opportunities and success stories of Indian companies. The roundtable offered valuable insights and fostered meaningful networking, reinforcing Arihant Electricals' commitment to global collaboration and innovation.



# 3. Arihant Electricals Engages in India–Italy Collaboration on Space and AI

Arihant Electricals had the privilege of attending the third meeting of the visiting Italian delegation at the Italian Cultural Centre, Italian Embassy, New Delhi. Organized by the embassies of India and Italy in association with SIA, ISRO, and ISPA, the meeting aimed to strengthen cooperation between the two countries. Our team had the opportunity to interact with Italian companies specialising in space technologies and advanced AI/ML solutions, exploring avenues for collaboration and innovation.


# 4. Electronica at Bangalore

Arihant Electricals made its presence felt at Electronica in Bangalore, engaging with industry leaders and exploring the latest innovations that are shaping the future of electronics.


# PEOPLE & CULTURE

ARIHANT

**At Arihant Electricals, our people are our greatest strength. This month, we celebrated birthdays, welcomed new team members, and fostered a positive workplace culture. Through these moments, we continue to build a collaborative and engaging work environment where everyone thrives!**

## Upcoming October Birthdays

Wishing you joy, success, and a fantastic year ahead!

| | |
|---|---|
| Sarvesh Tiwari | October 2 |
| Jaynandan Pandit | October 5 |
| Shivam Srivastava | October 6 |
| Sarvender Sagar | October 6 |
| Panna Lal | October 8 |
| Mayank Saini | October 8 |
| Manish Kumar R&D | October 8 |
| Preeti Chaudhary | October 10 |
| Vijay Dixit | October 11 |
| Nittin Kumar | October 17 |
| Shailendra Singh Bhadoria | October 24 |

ARIHANT

# Welcome Aboard! (New Joinees - September 2025)

Excited to have new talents join the Arihant family as we grow together!

**Prabhakar Dutta**
CFO

**Suraj Chaudhary**
IT Executive

**Bhuvnesh kumar**
Asst. Manager Sales

**Hemendra Singh**
Welder

**Ashutosh**
VSR

**Rupit Bhatnagar**
CSR

**Nitin Saini**
Executive Supply Chain

ARIHANT

## Festive Highlights

Team Arihant Electricals came together on Vishwakarma Puja to seek blessings for skill, innovation, and progress, celebrating the spirit of engineering excellence.

# MOMENTS OF LAUGHTER & FUN

ARIHANT

**At Arihant Electricals, even our circuits have stories!**

*One day, a new engineer joined the team and noticed a senior technician staring at a huge switchboard. Curious, he asked,*
*'Why are you just standing there?'*

*The technician replied, 'I'm waiting for the current to catch up with my ideas."*

*The engineer laughed and said, 'Shouldn't we just turn it on?'*

*The technician winked: 'Ah, but if we turn it on too soon, we might short-circuit our plans!'*

*Moral of the story:*
*At Arihant Electricals, we always plan carefully... because even electricity respects strategy*

# THE BREAK SPOT

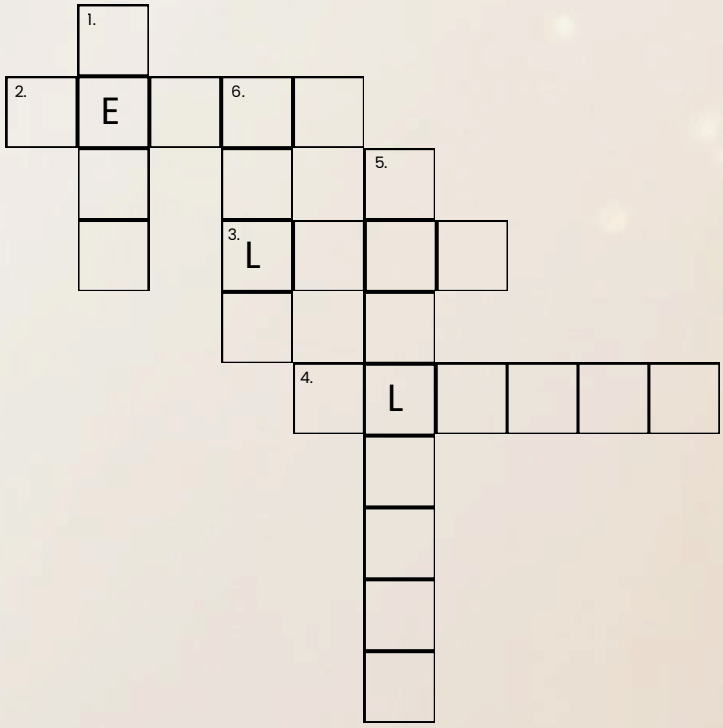
ARIHANT

## Arihant Electricals – Crossword Puzzle

Get ready to spark your brain and have some fun! This month, try your hand at our Crossword Puzzle and test your knowledge about Arihant Electricals. **Share your answers with the HR head;** the **first three winners will be featured in November's edition.** Don't miss the chance to showcase your skills.

**Across**

2. (5 Letters) A protective electrical device, such as the Maximum Current _____, which raises an alarm during overload conditions in locomotives.
3. (4 Letters) A resistor designed to provide a minimum _____ to a primary voltage transformer.
4. (6 Letters) A centrifugal _____ is installed in LHB coaches and pantry cars to facilitate air exhaust.




**Down**

1. (4 Letters) A core function generated by the Immersion Water Heater and Electric Hot Plate products manufactured by Arihant.
6. (4 Letters) A mechanical component related to the rotation of wheels, addressed in Arihant's railway applications (e.g., in specialized bearing systems).
5. (8 Letters) The primary transportation sector where Arihant supplies essential components like Master Controllers and ZS Couplers.

# CONTACT US

ARIHANT

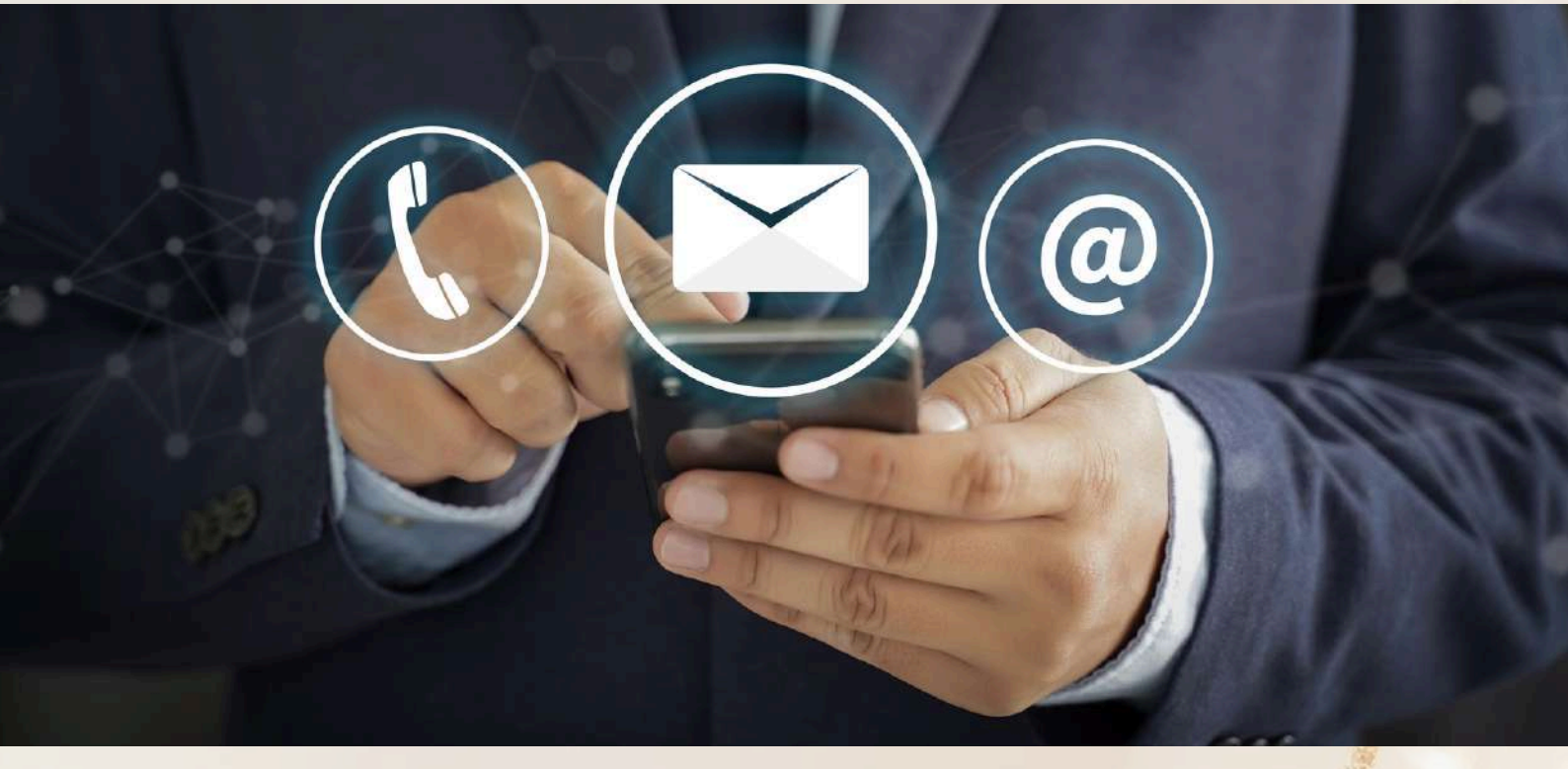
## E-mail
info@arihantelectricals.com

## Phone
+91 – 120 – 6256192

## Social Media
arihantelectr
arihantelectr
arihantelectricals

## Website
www.arihantelectricals.com
www.arisysel.com

## HQ Address
Plot No. 60, Ecotech 12, Greater Noida,
Gautam Budh Nagar – 201 318, UP, India



We solicit your valuable suggestions and feedback to enhance this newsletter for future editions. You can share your thoughts and suggestions by writing to us at: hrd@arihantelectricals.com